


Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 038	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing North	

Wetland 038	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 038	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing South	

Wetland 038	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 038	
Date: June 3, 2020	
Description: PSS wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200603-05
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 39.84376 Long: -82.18979 Datum: WGS 84

Soil Map Unit Name: Km - Killbuck 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? 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point in (w-bl-20200603-05) to PEM Wetland 039, fully delineated. Wetland located on closed depression on hillside over intermittent Stream 042; drains north to Stream 042.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>77.8%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>48</u></td> <td>x 2 = <u>96</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>18</u></td> <td>x 4 = <u>72</u></td> </tr> <tr> <td>UPL species <u>3</u></td> <td>x 5 = <u>15</u></td> </tr> <tr> <td>Column Totals: <u>109</u> (A)</td> <td><u>263</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.41</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>48</u>	x 2 = <u>96</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>18</u>	x 4 = <u>72</u>	UPL species <u>3</u>	x 5 = <u>15</u>	Column Totals: <u>109</u> (A)	<u>263</u> (B)	Prevalence Index = B/A = <u>2.41</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>20</u>	x 1 = <u>20</u>																				
FACW species <u>48</u>	x 2 = <u>96</u>																				
FAC species <u>20</u>	x 3 = <u>60</u>																				
FACU species <u>18</u>	x 4 = <u>72</u>																				
UPL species <u>3</u>	x 5 = <u>15</u>																				
Column Totals: <u>109</u> (A)	<u>263</u> (B)																				
Prevalence Index = B/A = <u>2.41</u>																					
1.	<u>Platanus occidentalis</u>	<u>3</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Rubus occidentalis</u>	<u>3</u>	<u>Yes</u>	<u>UPL</u>																	
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Carex cristatella</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Carex gracillima</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Agrimonia parviflora</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
4.	<u>Carex amphibola</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
5.	<u>Carex vulpinoidea</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
6.	<u>Scirpus atrovirens</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
7.	<u>Eupatorium perfoliatum</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
8.	<u>Vernonia gigantea</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
9.	<u>Toxicodendron radicans</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
10.	<u>Asclepias syriaca</u>	<u>3</u>	<u>No</u>	<u>FACU</u>																	
		=Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are FACW, FAC and FACU.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2	90	10YR 4/6	10	C	PL	Loamy/Clayey	sandy to silty loam
4-7	2.5Y 4/2	90	2.5Y 5/4	10	C	PL	Sandy	sandy silt
7-15	10YR 4/2	80	10YR 3/6	20	C	PL/M	Sandy	sandy silt

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> ? Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input checked="" type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ? Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf).
 Very loose, sandy soils (naturally problematic). Low chroma/high value matrix with required distinct and prominent redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are groundwater seepage and concentration of precipitation and surface runoff in geomorphic position. Wetland drains via overland flow to intermittent Stream 042 that flows west to Turkey Run that flows north to Jonathan Creek that flows west to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200603-05
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.84371 Long: -82.189785 Datum: WGS 84

Soil Map Unit Name: Km - Killbuck 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? 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sampling point out (Upland 037) for Wetland 039, about 5' south of boundary. Not a wetland point, did not meet hydric soil or hydrology criteria	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>13</u></td> <td>x 4 = <u>52</u></td> </tr> <tr> <td>UPL species <u>48</u></td> <td>x 5 = <u>240</u></td> </tr> <tr> <td>Column Totals: <u>126</u> (A)</td> <td><u>437</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.47</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>13</u>	x 4 = <u>52</u>	UPL species <u>48</u>	x 5 = <u>240</u>	Column Totals: <u>126</u> (A)	<u>437</u> (B)	Prevalence Index = B/A = <u>3.47</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>50</u>	x 2 = <u>100</u>																				
FAC species <u>15</u>	x 3 = <u>45</u>																				
FACU species <u>13</u>	x 4 = <u>52</u>																				
UPL species <u>48</u>	x 5 = <u>240</u>																				
Column Totals: <u>126</u> (A)	<u>437</u> (B)																				
Prevalence Index = B/A = <u>3.47</u>																					
1. <u>Rubus occidentalis</u>		<u>40</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Hypericum prolificum</u>		<u>10</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Elaeagnus umbellata</u>		<u>5</u>	<u>No</u>	<u>UPL</u>																	
4. <u>Rhus typhina</u>		<u>3</u>	<u>No</u>	<u>UPL</u>																	
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Dichanthelium clandestinum</u>		<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Agrimonia parviflora</u>		<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Solidago gigantea</u>		<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Impatiens pallida</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Cirsium arvense</u>		<u>3</u>	<u>No</u>	<u>FACU</u>																	
6.																					
7.																					
8.																					
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicators present, dominance test > 50%, dominant species are FACW, FAC and UPL																					

SOIL

Sampling Point: -bl-20200603

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/3	100					Loamy/Clayey	sandy loam
6-15	10YR 5/6	100					Loamy/Clayey	sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
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Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 One secondary, no primary hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 3, 2020
Wetland: w-bl-20200603-05	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

8	8
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input checked="" type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

26	18
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

35	9
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 3, 2020
Wetland: w-bl-20200603-05	Rater: BL, SM

35 subtotal first page

35 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

39 4

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
0	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

39 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 039	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 039	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 039	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 039	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 039	
Date: June 3, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200603-04
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 39.84399 Long: -82.190109 Datum: WGS 84

Soil Map Unit Name: Km - Killbuck silt loam, frequently flooded NWI classification: R5UBH

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 X, 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point in (w-bl-20200603-04) for PSS Wetland 040, located within channel terraces of intermittent Stream 042. Naturally problematic soils due to active channel and floodplain with sedimentation and gravel substrate. Wetland fully delineated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>35</u></td> <td>x 1 = <u>35</u></td> </tr> <tr> <td>FACW species <u>85</u></td> <td>x 2 = <u>170</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>145</u> (A)</td> <td><u>295</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.03</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>85</u>	x 2 = <u>170</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>145</u> (A)	<u>295</u> (B)	Prevalence Index = B/A = <u>2.03</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>35</u>	x 1 = <u>35</u>																				
FACW species <u>85</u>	x 2 = <u>170</u>																				
FAC species <u>15</u>	x 3 = <u>45</u>																				
FACU species <u>5</u>	x 4 = <u>20</u>																				
UPL species <u>5</u>	x 5 = <u>25</u>																				
Column Totals: <u>145</u> (A)	<u>295</u> (B)																				
Prevalence Index = B/A = <u>2.03</u>																					
1. <u>Salix nigra</u>		30	Yes	OBL																	
2. <u>Salix discolor</u>		10	Yes	FACW																	
3. <u>Alnus glutinosa</u>		10	Yes	FACW																	
4. <u>Platanus occidentalis</u>		5	No	FACW																	
5. <u>Rubus occidentalis</u>		3	No	UPL																	
		60 =Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Phalaris arundinacea</u>		20	Yes	FACW																	
2. <u>Solidago gigantea</u>		20	Yes	FACW																	
3. <u>Geum canadense</u>		10	Yes	FAC																	
4. <u>Dichanthelium clandestinum</u>		10	Yes	FACW																	
5. <u>Packera aurea</u>		10	Yes	FACW																	
6. <u>Eupatorium perfoliatum</u>		5	No	OBL																	
7. <u>Symphotrichum prenanthoides</u>		5	No	FAC																	
8. <u>Medicago sativa</u>		5	No	FACU																	
9. <u>Eupatorium maculatum</u>		3	No	OBL																	
10. <u> </u>																					
		88 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are OBL, FACW and FAC.																					

VEGETATION Continued – Use scientific names of plants.

Sampling Point: w-bl-20200603-04

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
=Total Cover				
<u>Sapling/Shrub Stratum</u>				
6. <i>Elaeagnus umbellata</i>	2	No	UPL	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
60 =Total Cover				
<u>Herb Stratum</u>				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
88 =Total Cover				
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
=Total Cover				

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 (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/3	100					Loamy/Clayey	sandy loam
6-14	10YR 4/2	90	10YR 3/3	10	C	PL	Loamy/Clayey	sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf).
 Very loose, sandy soils (naturally problematic) a result of regular sediment deposition on terraces of Stream 042. Redox concentrations in pore linings are faint. Shovel refusal at 14" due to gravel stream substrates.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> 0 </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are overbank flow from intermittent stream and concentration of precipitation and surface runoff in geomorphic position. Wetland abuts intermittent Stream 042 that flows west to Turkey Run that flows north to Jonathan Creek that flows west to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200603-04
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 39.84405 Long: -82.19006 Datum: WGS 84

Soil Map Unit Name: Km - Killbuck 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 X, 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sampling point out (Upland 038) for Wetland 040, about 20' north of wetland boundary on upper terrace/spoils pile = disturbed soils. Not a wetland point, no wetland criteria met	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>28</u></td> <td>x 2 = <u>56</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>128</u> (A)</td> <td><u>456</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.56</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>28</u>	x 2 = <u>56</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>128</u> (A)	<u>456</u> (B)	Prevalence Index = B/A = <u>3.56</u>	
Total % Cover of:	Multiply by:																				
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Column Totals: <u>128</u> (A)	<u>456</u> (B)																				
Prevalence Index = B/A = <u>3.56</u>																					
1. <u>Rosa multiflora</u>	<u>20</u>	Yes	FACU																		
2. <u>Prunus serotina</u>	<u>10</u>	Yes	FACU																		
3. <u>Elaeagnus umbellata</u>	<u>5</u>	No	UPL																		
4. <u>Fraxinus pennsylvanica</u>	<u>3</u>	No	FACW																		
5. <u> </u>																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Solidago altissima</u>	<u>40</u>	Yes	FACU																		
2. <u>Phalaris arundinacea</u>	<u>20</u>	Yes	FACW																		
3. <u>Galium aparine</u>	<u>15</u>	No	FAC																		
4. <u>Daucus carota</u>	<u>10</u>	No	UPL																		
5. <u>Geum aleppicum</u>	<u>5</u>	No	FACW																		
6. <u> </u>	<u>5</u>	No																			
7. <u> </u>	<u>5</u>	No																			
8. <u> </u>	<u>5</u>	No																			
9. <u> </u>	<u>3</u>	No																			
10. <u> </u>																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominant species are FACW and FACU																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100					Loamy/Clayey	sandy loam
3-14	10YR 3/4	80	10YR 3/1	20	C	M	Loamy/Clayey	sandy loam; possible coal fines

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks)
---	--	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u> x </u>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present, low chroma/low value matrix without redox features

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (minimum of two required)</u>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Geomorphic Position (D2)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)						
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)						
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)						
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)						

Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): <u> 0 </u> Water Table Present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation Present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u> X </u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 3, 2020
Wetland: w-bl-20200603-04	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

8	8
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input checked="" type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

25	17
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input checked="" type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input checked="" type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input checked="" type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

34	9
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input checked="" type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input checked="" type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 3, 2020
Wetland: w-bl-20200603-04	Rater: BL, SM

34 subtotal first page

34	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

- | | |
|--------------------------|--|
| <input type="checkbox"/> | Bog (10 pts) |
| <input type="checkbox"/> | Fen (10 pts) |
| <input type="checkbox"/> | Old Growth Forest (10 pts) |
| <input type="checkbox"/> | Mature forested wetland (5 pts) |
| <input type="checkbox"/> | Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts) |
| <input type="checkbox"/> | Lake Erie coastal/tributary wetland-restricted hydrology (5 pts) |
| <input type="checkbox"/> | Lake Plain Sand Prairies (Oak Openings) (10 pts) |
| <input type="checkbox"/> | Relict Wet Prairies (10 pts) |
| <input type="checkbox"/> | Known occurrence state/federal threatened or endangered species (10) |
| <input type="checkbox"/> | Significant migratory songbird/waterfowl habitat or usage (10 pts) |
| <input type="checkbox"/> | Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts) |

39	5
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

- | | |
|--------------------------|--------------|
| <input type="checkbox"/> | Aquatic bed |
| 0 | Emergent |
| 2 | Shrub |
| <input type="checkbox"/> | Forest |
| <input type="checkbox"/> | Mudflats |
| <input type="checkbox"/> | Open water |
| <input type="checkbox"/> | Other (list) |

6b. Horizontal (plan view) interspersions

Select only one

- | | |
|--------------------------|---------------------|
| <input type="checkbox"/> | High (5) |
| <input type="checkbox"/> | Moderately high (4) |
| <input type="checkbox"/> | Moderate (3) |
| <input type="checkbox"/> | Moderately low (2) |
| x | Low (1) |
| <input type="checkbox"/> | None (0) |

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

- | | |
|--------------------------|-----------------------------|
| <input type="checkbox"/> | Extensive >75 % cover (-5) |
| <input type="checkbox"/> | Moderate 25-75% cover (-3) |
| x | Sparse 5-25% cover (-1) |
| <input type="checkbox"/> | Nearly Absent <5% cover (0) |
| <input type="checkbox"/> | Absent (1) |

6d. Microtopography

Score all present using 0 to 3 scale

- | | |
|---|---------------------------------|
| 1 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15 cm (6") |
| 0 | Standing dead > 25 cm (10") dbh |
| 2 | Amphibian breeding pools |

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

39 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 040	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing North	

Wetland 040	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 040	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing South	

Wetland 040	
Date: June 3, 2020	
Description: PSS wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 040	
Date: June 3, 2020	
Description: PSS wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bi-20200603-06
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 10 Lat: 39.84806 Long: -82.19441 Datum: WGS 84

Soil Map Unit Name: GnB - Glenford silt loam, 1 to 8 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 X, 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point w-bi-20200603-06 point in to PEM Wetland 041. Drainage ditch wetland along residential driveway. Narrow, intermittent drainage channel present throughout. Wetland drains to south, continues to south to US-22. Soils are significantly disturbed via dredging and erosion.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>105</u></td> <td>x 2 = <u>210</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>2</u></td> <td>x 5 = <u>10</u></td> </tr> <tr> <td>Column Totals: <u>132</u> (A)</td> <td><u>320</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.42</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>105</u>	x 2 = <u>210</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>2</u>	x 5 = <u>10</u>	Column Totals: <u>132</u> (A)	<u>320</u> (B)	Prevalence Index = B/A = <u>2.42</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>105</u>	x 2 = <u>210</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>25</u>	x 4 = <u>100</u>																				
UPL species <u>2</u>	x 5 = <u>10</u>																				
Column Totals: <u>132</u> (A)	<u>320</u> (B)																				
Prevalence Index = B/A = <u>2.42</u>																					
1. <u>Rosa multiflora</u>	<u>10</u>	Yes	FACU																		
2. <u>Salix interior</u>	<u>5</u>	Yes	FACW																		
3.																					
4.																					
5.																					
		<u>15</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Phalaris arundinacea</u>	<u>70</u>	Yes	FACW																		
2. <u>Solidago gigantea</u>	<u>15</u>	No	FACW																		
3. <u>Urtica dioica</u>	<u>10</u>	No	FACW																		
4. <u>Cirsium arvense</u>	<u>10</u>	No	FACU																		
5. <u>Galium aparine</u>	<u>5</u>	No	FACU																		
6. <u>Packera aurea</u>	<u>3</u>	No	FACW																		
7. <u>Brassica nigra</u>	<u>2</u>	No	UPL																		
8.																					
9.																					
10.																					
		<u>115</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u>Vitis riparia</u>	<u>2</u>	No	FACW																		
2.																					
		<u>2</u> =Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are FACW and FACU.																					

Sampling Point: bl-20200603-

HYDROLOGY				
Wetland Hydrology Indicators:				
<u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)		
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)			
Field Observations:				
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="3"/>
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="3"/>
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
(includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				
Multiple primary and secondary hydrology indicators present. Wetland drains directly to intermittent Stream 043 that drains through culvert to south to intermittent Stream 042 that that flows west to Turkey Run that flows north to Jonathan Creek that flows west to Muskingum River, a TNW.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200603-07
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): flat

Slope (%): 3 Lat: 39.84808 Long: -82.194345 Datum: WGS 84

Soil Map Unit Name: GnB - Glenford silt loam, 1 to 8 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 X, 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? Yes <u> </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sample point out (Upland 040) for Wetland 039, located about 5' east of wetland boundary on edge of agricultural field. Vegetation significantly disturbed from farming. Not a wetland point, no wetland criteria met	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>98</u></td> <td>x 4 = <u>392</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>131</u> (A)</td> <td><u>488</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.73</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>98</u>	x 4 = <u>392</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>131</u> (A)	<u>488</u> (B)	Prevalence Index = B/A = <u>3.73</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>3</u>	x 2 = <u>6</u>																				
FAC species <u>30</u>	x 3 = <u>90</u>																				
FACU species <u>98</u>	x 4 = <u>392</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>131</u> (A)	<u>488</u> (B)																				
Prevalence Index = B/A = <u>3.73</u>																					
		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Cirsium arvense</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2.	<u>Parthenocissus quinquefolia</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Phalaris arundinacea</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
4.	<u>Galium aparine</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
5.	<u>Stellaria media</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
6.	<u>Bromus inermis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
7.	<u>Ambrosia trifida</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
8.	<u>Poa pratensis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
9.	<u>Packera glabella</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
10.	<u>Allium canadense</u>	<u>3</u>	<u>No</u>	<u>FACU</u>																	
		<u>131</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominant species are FAC and FACU																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/3	100					Sandy	silty sand
6-14	10YR 5/4	100					Loamy/Clayey	sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
---	--

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (minimum of two required)</u>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)						

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 3, 2020
Wetland: w-bl-20200603-06	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

2	2
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

14	12
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input checked="" type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input checked="" type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

24	10
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input checked="" type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 3, 2020
Wetland: w-bl-20200603-06	Rater: BL, SM

24 subtotal first page

24 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

22 -2

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	0 Aquatic bed
<input type="checkbox"/>	1 Emergent
<input type="checkbox"/>	0 Shrub
<input type="checkbox"/>	0 Forest
<input type="checkbox"/>	0 Mudflats
<input type="checkbox"/>	0 Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input checked="" type="checkbox"/>	x None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input checked="" type="checkbox"/>	X Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

<input type="checkbox"/>	0 Vegetated hummocks/tussocks
<input type="checkbox"/>	0 Coarse woody debris >15 cm (6")
<input type="checkbox"/>	0 Standing dead > 25 cm (10") dbh
<input type="checkbox"/>	0 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

22 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 041	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 041	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 041	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 041	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 041	
Date: June 3, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200603-07
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 39.85054 Long: -82.19714 Datum: WGS 84

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point for w-bl-20200603-07 point in for PEM Wetland 042. Wetland is fully delineated and drains to west via ephemeral Stream 045 to an NWI mapped pond. Wetland is a depression in a swale fed by ephemeral Stream 045.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>89</u></td> <td>x 2 = <u>178</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>109</u> (A)</td> <td><u>198</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.82</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>89</u>	x 2 = <u>178</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>109</u> (A)	<u>198</u> (B)	Prevalence Index = B/A = <u>1.82</u>	
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OBL species <u>20</u>	x 1 = <u>20</u>																				
FACW species <u>89</u>	x 2 = <u>178</u>																				
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UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>109</u> (A)	<u>198</u> (B)																				
Prevalence Index = B/A = <u>1.82</u>																					
1. <u>Ulmus americana</u>		<u>2</u>	No	FACW																	
2. <u>Fraxinus pennsylvanica</u>		<u>2</u>	No	FACW																	
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		<u>4</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Impatiens pallida</u>		<u>30</u>	Yes	FACW																	
2. <u>Agrostis gigantea</u>		<u>30</u>	Yes	FACW																	
3. <u>Typha angustifolia</u>		<u>20</u>	No	OBL																	
4. <u>Dichanthelium clandestinum</u>		<u>15</u>	No	FACW																	
5. <u>Agrimonia parviflora</u>		<u>10</u>	No	FACW																	
6. <u> </u>																					
7. <u> </u>																					
8. <u> </u>																					
9. <u> </u>																					
10. <u> </u>																					
		<u>105</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL and FACW.																					

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

Type: _____
Depth (inches): _____

Hydric soil indicator present as low chroma/high value matrix.

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

- ☐ Surface Soil Cracks (B6)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Surface Water Present? Yes _____ No X Depth (inches): 0
 Water Table Present? Yes _____ No X Depth (inches): _____
 Saturation Present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present?	Yes	X	No
-----------------------------------	------------	----------	-----------

Multiple secondary hydrology indicators present. Primary sources of hydrology are ephemeral flow from Stream 045 and concentration of precipitation and surface runoff. Wetland is adjacent to ephemeral Stream 045, drains to west outside study area to NWI-mapped wetland to overland flow to Turkey Run.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200603-08
 Investigator(s): SM, BL Section, Township, Range: S 28 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.85059 Long: -82.19721 Datum: NAD83

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 6 to 12 percent slopes, eroded 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sampling point out (Upland 041) for Wetland 042, located about 5' northwest of wetland boundary at higher elevation. Not a wetland point, no wetland criteria met	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>44.4%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>13</u></td> <td>x 2 = <u>26</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>42</u></td> <td>x 4 = <u>168</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>354</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.37</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>13</u>	x 2 = <u>26</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>42</u>	x 4 = <u>168</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>105</u> (A)	<u>354</u> (B)	Prevalence Index = B/A = <u>3.37</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>13</u>	x 2 = <u>26</u>																				
FAC species <u>45</u>	x 3 = <u>135</u>																				
FACU species <u>42</u>	x 4 = <u>168</u>																				
UPL species <u>5</u>	x 5 = <u>25</u>																				
Column Totals: <u>105</u> (A)	<u>354</u> (B)																				
Prevalence Index = B/A = <u>3.37</u>																					
1. <u>Rubus occidentalis</u>		<u>5</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Fraxinus pennsylvanica</u>		<u>3</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Juglans nigra</u>		<u>2</u>	<u>Yes</u>	<u>FACU</u>																	
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Panicum virgatum</u>		<u>30</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Schedonorus arundinaceus</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Juncus tenuis</u>		<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Agrimonia parviflora</u>		<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
5. <u>Cirsium arvense</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
6. <u>Solidago altissima</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
7. <u>Carex amphibola</u>		<u>5</u>	<u>No</u>	<u>FAC</u>																	
8. <u>Achillea millefolium</u>		<u>5</u>	<u>No</u>	<u>FACU</u>																	
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominant species are FACW, FAC, FACU and UPL																					

SOIL

Sampling Point: -bl-20200603

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/2	100					Loamy/Clayey	silty to sandy loam
5-17	10YR 5/4	60	10YR 5/2	40	C	M	Loamy/Clayey	sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
---	--

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project**Date:** June 3, 2020**Wetland:** w-bl-20200603-07**Rater:** BL, SM

0 0

Subtotal Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

7 7

Subtotal Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

22 15

Subtotal Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

- (select one or double check & average)
- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ ditch ☐ point source (nonstormwater)
- ☐ dike ☒ filling/grading
- ☐ tile ☐ road bed/RR track
- ☐ weir ☐ dredging
- ☐ stormwater input ☐ other - list

29 7

Subtotal Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

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

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select one.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

Check all disturbances observed

- ☒ mowing ☐ shrub/sapling removal
- ☐ grazing ☐ herbaceous/aquatic bed removal
- ☐ clearcutting ☐ sedimentation
- ☐ selective cutting ☐ dredging
- ☐ woody debris removal ☐ farming
- ☐ toxic pollutants ☐ nutrient enrichment

29 subtotal this page

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 3, 2020
Wetland: w-bl-20200603-07	Rater: BL, SM

29 subtotal first page

29 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

31 2

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	0 Aquatic bed
<input type="checkbox"/>	1 Emergent
<input type="checkbox"/>	0 Shrub
<input type="checkbox"/>	0 Forest
<input type="checkbox"/>	0 Mudflats
<input type="checkbox"/>	0 Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input checked="" type="checkbox"/>	x None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input checked="" type="checkbox"/>	x Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

<input checked="" type="checkbox"/>	2 Vegetated hummocks/tussocks
<input type="checkbox"/>	0 Coarse woody debris >15 cm (6")
<input type="checkbox"/>	0 Standing dead > 25 cm (10") dbh
<input type="checkbox"/>	0 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)

Provisional Wetland Category:

Modified Category 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 042	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 042	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 042	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 042	
Date: June 3, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 042	
Date: June 3, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200603-08a
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave

Slope (%): 10 Lat: 39.85248 Long: -82.19897 Datum: WGS 84

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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 X, 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point in (w-bl-20200603-08a) for PEM component Wetland 043a, a PEM/PSS wetland complex. Wetland is a hillside seepage in fallow field. Wetland exhibits significantly disturbed soils- rocky and shallow, tilled, possibly prior to strip mine. Wetland drains downslope to the west and is	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
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1.	<u>Agrostis gigantea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Packera glabella</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
3.	<u>Vernonia gigantea</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
4.	<u>Juncus tenuis</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
5.	<u>Scirpus atrovirens</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
6.	<u>Cyperus strigosus</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
7.	<u>Rumex crispus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
8.	<u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
9.	<u>Alopecurus pratensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
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Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%, dominant species FACW and FAC.																					

VEGETATION Continued – Use scientific names of plants.

Sampling Point: w-bl-20200603-08

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
=Total Cover			_____	
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
=Total Cover			_____	
<u>Herb Stratum</u>				
11. <i>Persicaria maculosa</i>	5	No	FACW	
12. <i>Mimulus ringens</i>	3	No	OBL	
13. <i>Brassica nigra</i>	3	No	UPL	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
121 =Total Cover			_____	
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
=Total Cover			_____	

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

SOIL

Sampling Point: 01-20200603-(

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)			
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <input type="text" value="0"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <input type="text"/>
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				
One primary and multiple secondary hydrology indicators present. Primary sources of hydrology are groundwater seepage and concentration of precipitation and surface runoff in geomorphic position. Wetland drains to north outside study area through drainage swale to NHD-mapped stream that flows northwest to Turkey Run that flows north to Jonathan Creek that flows west to Muskingum River, a TNW. Potentially isolated.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200603-08b
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 39.85286 Long: -82.19948 Datum: WGS 84

Soil Map Unit Name: MeC - Mentor silt loam, gravelly substratum, 8 to 15 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 x, 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point in (w-bl-20200603-08b) for PSS component Wetland 043b, a PEM/PSS wetland complex. Wetland is a hillside seepage in fallow field. Wetland exhibits significantly disturbed soils- rocky and shallow, tilled. Significant sedimentation present.	

VEGETATION – Use scientific names of plants.

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3.	<u>Agrostis gigantea</u>	15	No	FACW																																																																																																																																																																																															
4.	<u>Poa compressa</u>	10	No	FACU																																																																																																																																																																																															
5.	<u>Juncus effusus</u>	5	No	OBL																																																																																																																																																																																															
6.	<u>Asclepias syriaca</u>	5	No	FACU																																																																																																																																																																																															
7.	<u>Apocynum cannabinum</u>	2	No	FAC																																																																																																																																																																																															
8.																																																																																																																																																																																																			
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Woody Vine Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																															
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Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)																																																																																																																																																																																																		
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FACW species <u>50</u>	x 2 = <u>100</u>																																																																																																																																																																																																		
FAC species <u>42</u>	x 3 = <u>126</u>																																																																																																																																																																																																		
FACU species <u>18</u>	x 4 = <u>72</u>																																																																																																																																																																																																		
UPL species <u>5</u>	x 5 = <u>25</u>																																																																																																																																																																																																		
Column Totals: <u>150</u> (A)	<u>358</u> (B)																																																																																																																																																																																																		
Prevalence Index = B/A = <u>2.39</u>																																																																																																																																																																																																			
Hydrophytic Vegetation Indicators:																																																																																																																																																																																																			
<u> </u> 1 - Rapid Test for Hydrophytic Vegetation																																																																																																																																																																																																			
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Yes <u>X</u>	No <u> </u>																																																																																																																																																																																																		
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are OBL, FACW and FAC.																																																																																																																																																																																																			

Sampling Point: 20200603-(

HYDROLOGY				
Wetland Hydrology Indicators:				
<u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)			
Field Observations:			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="0"/>		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				
Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are groundwater seepage and concentration of precipitation and surface runoff in geomorphic position. Wetland drains to north outside study area through drainage swale to NHD-mapped stream that flows northwest to Turkey Run that flows north to Jonathan Creek that flows west to Muskingum River, a TNW. Potentially isolated.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200603-09
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 12 Lat: 39.85242 Long: -82.19903 Datum: NAD83

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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 X, 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? Yes <u>x</u> No <u>0</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Sample point out (Upland 042) for Wetland 043, located about 10' south of wetland boundary at equal elevation. Soils significantly disturbed due to past farming. Not a wetland point, no wetland criteria met	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>38</u></td> <td>x 4 = <u>152</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>108</u> (A)</td> <td><u>322</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.98</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>38</u>	x 4 = <u>152</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>108</u> (A)	<u>322</u> (B)	Prevalence Index = B/A = <u>2.98</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>40</u>	x 2 = <u>80</u>																				
FAC species <u>30</u>	x 3 = <u>90</u>																				
FACU species <u>38</u>	x 4 = <u>152</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>108</u> (A)	<u>322</u> (B)																				
Prevalence Index = B/A = <u>2.98</u>																					
		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Agrostis gigantea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2.	<u>Bromus arvensis</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Stellaria media</u>	<u>20</u>	<u>No</u>	<u>FAC</u>																	
4.	<u>Packera glabella</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
5.	<u>Poa pratensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
6.	<u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7.	<u>Allium canadense</u>	<u>3</u>	<u>No</u>	<u>FACU</u>																	
8.																					
9.																					
10.																					
		<u>108</u> =Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present, Prevalence index < 3.0, dominant species are FACW and FACU																					

HYDROLOGY			
Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="0"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Surface soil cracks present due to past farming activity, not evidence of hydrology action. No hydrology indicators present			

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 3, 2020
Wetland: w-bl-20200603-08ab	Rater: BL, SM

1	1
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)

Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input checked="" type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

4	3
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)

2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

13	9
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)

3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input checked="" type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> dike	<input checked="" type="checkbox"/> filling/grading
<input checked="" type="checkbox"/> tile	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other - list

20	7
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed	
<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input checked="" type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 3, 2020
Wetland: w-bl-20200603-08ab	Rater: BL, SM

20 subtotal first page

20 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

24 4

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
0	Emergent
1	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
1	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 043a	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 043a	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 43a	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 043a	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 043a	
Date: June 3, 2020	
Description: PEM wetland Category 1 Soil Pit	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 043b	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 043b	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 043b	
Date: June 3, 2020	
Description: PSS wetland Category 1 Facing South	

Wetland 043b	
Date: June 3, 2020	
Description: PSS wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 043b	
Date: June 3, 2020	
Description: PSS wetland Category 1 Soil Pit	

Wetland 044

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bi-20200603-09
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.85325 Long: -82.20025 Datum: WGS 84

Soil Map Unit Name: MeC - Mentor silt loam, gravelly substratum, 8 to 15 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 x, 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point w-bi-20200603-09 point in to PEM Wetland 044. Wetland is located in drainage swale in fallow farm field. Significantly disturbed soils due to farming and sedimentation. Boundary delineated by topography and presence/lack of vegetation, extends to north and south.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>35</u></td> <td>x 1 = <u>35</u></td> </tr> <tr> <td>FACW species <u>51</u></td> <td>x 2 = <u>102</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>96</u> (A)</td> <td><u>177</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.84</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>51</u>	x 2 = <u>102</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>96</u> (A)	<u>177</u> (B)	Prevalence Index = B/A = <u>1.84</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>35</u>	x 1 = <u>35</u>																				
FACW species <u>51</u>	x 2 = <u>102</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>10</u>	x 4 = <u>40</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>96</u> (A)	<u>177</u> (B)																				
Prevalence Index = B/A = <u>1.84</u>																					
		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Agrostis gigantea</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Carex lupulina</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
3.	<u>Poa compressa</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4.	<u>Scirpus cyperinus</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
5.	<u>Calamagrostis canadensis</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
6.	<u>Solidago gigantea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
7.	<u>Agrimonia parviflora</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
8.	<u>Verbesina alternifolia</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
9.																					
10.																					
		<u>96</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.																					
2.																					
		=Total Cover																			
Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are FACW and OBL.																					

SOIL

Sampling Point: bl-20200603-

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2	95	10YR 4/4	5	C	PL	Loamy/Clayey	
4-16	10YR 4/1	90	10YR 4/6	10	C	PL	Loamy/Clayey	distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> ? Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?	Yes	No
Type: _____			
Depth (inches): _____			

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf).
Hydric soil indicator present as low chroma/high value matrix with required distinct redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	0	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland drains to north outside study area through drainage swale to NHD-mapped stream that flows northwest to Turkey Run that flows north to Jonathan Creek that flows west to Muskingum River, a TNW. Potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/03/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200603-09
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 12 Lat: 39.85334 Long: -82.20030 Datum: WGS 84

Soil Map Unit Name: MeC - Mentor silt loam, gravelly substratum, 8 to 15 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 X, 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Sample point Upland 043 is point out for Wetland 044, located about 10' northwest of wetland boundary in farm field. Soils significantly disturbed by farming. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>18</u></td> <td>x 3 = <u>54</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>63</u> (A)</td> <td><u>184</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.92</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>18</u>	x 3 = <u>54</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>63</u> (A)	<u>184</u> (B)	Prevalence Index = B/A = <u>2.92</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>25</u>	x 2 = <u>50</u>																				
FAC species <u>18</u>	x 3 = <u>54</u>																				
FACU species <u>20</u>	x 4 = <u>80</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>63</u> (A)	<u>184</u> (B)																				
Prevalence Index = B/A = <u>2.92</u>																					
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
<u>Herb Stratum</u>	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Agrostis gigantea</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Stellaria media</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Festuca rubra</u>		<u>10</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Poa pratensis</u>		<u>5</u>	<u>No</u>	<u>FAC</u>																	
5. <u>Packera glabella</u>		<u>5</u>	<u>No</u>	<u>FACW</u>																	
6. <u>Ambrosia artemisiifolia</u>		<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u>Vernonia gigantea</u>		<u>3</u>	<u>No</u>	<u>FAC</u>																	
8. <u> </u>																					
9. <u> </u>																					
10. <u> </u>																					
		<u>63</u> =Total Cover																			
<u>Woody Vine Stratum</u>	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			

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

Hydrophytic vegetation indicator present as prevalence index < 3.0, dominant species are FACW and FACU

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/2	100					Loamy/Clayey	loam
8-16	10YR 4/3	90	10YR 5/6	10	C	M	Loamy/Clayey	sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?	Yes	No	X
Type: _____				
Depth (inches): _____				

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf).
No hydric soil indicators present, low chroma/high value soils without required redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> X
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches):	0	
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches):		
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/> X	Depth (inches):		
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
One secondary indicator present. Surface soil cracks present due to past farming activity.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 3, 2020
Wetland: w-bl-20200603-09	Rater: BL, SM

1	1
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)

Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input checked="" type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

4	3
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)

2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

11	7
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)

3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> dike	<input checked="" type="checkbox"/> filling/grading
<input checked="" type="checkbox"/> tile	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other - list

18	7
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed	
<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input checked="" type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 3, 2020
Wetland: w-bl-20200603-09	Rater: BL, SM

18 subtotal first page

18 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

- ☐ Bog (10 pts)
- ☐ Fen (10 pts)
- ☐ Old Growth Forest (10 pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10 pts)
- ☐ Relict Wet Prairies (10 pts)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/waterfowl habitat or usage (10 pts)
- ☐ Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

22 4

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

- ☐ Aquatic bed
- 1 ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other (list)

6b. Horizontal (plan view) interspersions

Select only one

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- x ☐ None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

- ☐ Extensive >75 % cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly Absent <5% cover (0)
- X ☐ Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

- 2 ☐ Vegetated hummocks/tussocks
- 0 ☐ Coarse woody debris >15 cm (6")
- 0 ☐ Standing dead > 25 cm (10") dbh
- 0 ☐ Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

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

22 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 044	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 044	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 044	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 044	
Date: June 3, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 044	
Date: June 3, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200604-01
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): concave

Slope (%): 5 Lat: 39.85453 Long: -82.20123 Datum: NAD 83

Soil Map Unit Name: MeC - Mentor silt loam, gravelly substratum, 8 to 15 percent slopes NWI classification: PEM1A

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 x, 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point in for PEM Wetland 045. Wetland is potentially isolated, located in low swale as NWI mapped emergent wetland, extends north outside study area almost to road. Soils possibly problematic due to farming practices.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1.	<u>Sambucus nigra</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>33</u></td> <td>x 1 = <u>33</u></td> </tr> <tr> <td>FACW species <u>61</u></td> <td>x 2 = <u>122</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>96</u> (A)</td> <td><u>161</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.68</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>33</u>	x 1 = <u>33</u>	FACW species <u>61</u>	x 2 = <u>122</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>96</u> (A)	<u>161</u> (B)	Prevalence Index = B/A = <u>1.68</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>33</u>	x 1 = <u>33</u>																				
FACW species <u>61</u>	x 2 = <u>122</u>																				
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UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>96</u> (A)	<u>161</u> (B)																				
Prevalence Index = B/A = <u>1.68</u>																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Carex cristatella</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2.	<u>Scirpus atrovirens</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>																	
3.	<u>Onoclea sensibilis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
4.	<u>Agrostis gigantea</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
5.	<u>Leersia virginica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
6.	<u>Persicaria sagittata</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
7.	<u>Eupatorium perfoliatum</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
8.	<u>Phalaris arundinacea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
9.	<u>Poa palustris</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
10.	<u>Juncus effusus</u>	<u>3</u>	<u>No</u>	<u>OBL</u>																	
		=Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL and FACW.																					

VEGETATION Continued – Use scientific names of plants.

Sampling Point: w-bl-20200604-01

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
		=Total Cover		
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
		2 =Total Cover		
<u>Herb Stratum</u>				
11. <i>Solidago gigantea</i>	1	No	FACW	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
		94 =Total Cover		
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
		=Total Cover		

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 (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	90	10YR 3/3	10	C	PL	Loamy/Clayey	distinct redox concentrations
6-16	2.5Y 5/1	90	10YR 4/6	10	C	PL	Loamy/Clayey	prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> ? Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> ? Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value depleted matrix with required redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland extends to north to abut NHD mapped stream that flows northwest to Turkey Run that flows north to Jonathan Creek that flows east to Moxahala Creek that flows north to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200604-01
 Investigator(s): SM, BL Section, Township, Range: S 21 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.85449 Long: -82.20107 Datum: NAD 83

Soil Map Unit Name: MeC - Mentor silt loam, gravelly substratum, 8 to 15 percent slopes NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil x, 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Upland 044 point out to Wetland 045. Located approximately 15' east of wetland boundary, upslope, located within mapped NWI wetland. Significantly disturbed soils from farming (located in fallow field). Not a wetland point, does not meet hydrophytic vegetation criteria	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>47</u></td> <td>x 2 = <u>94</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>58</u></td> <td>x 4 = <u>232</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>326</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.10</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>47</u>	x 2 = <u>94</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>58</u>	x 4 = <u>232</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>326</u> (B)	Prevalence Index = B/A = <u>3.10</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>47</u>	x 2 = <u>94</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>58</u>	x 4 = <u>232</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>105</u> (A)	<u>326</u> (B)																				
Prevalence Index = B/A = <u>3.10</u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)																				
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Packera glabella</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Stellaria media</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Veronica arvensis</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4.	<u>Agrostis gigantea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
5.	<u>Poa compressa</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
6.	<u>Bromus arvensis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
7.	<u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
8.	<u>Alopecurus pratensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
9.	<u>Solidago altissima</u>	<u>3</u>	<u>No</u>	<u>FACU</u>																	
		<u>105</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominance test < 50%, prevalence index > 3.0. Dominant species are FACW and FACU. Vegetation distinctly different from adjacent wetland vegetation.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/3	100					Sandy	
8-17	2.5Y 4/2	90	2.5Y 5/4	10	C	PL	Loamy/Clayey	Sandy Clay Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 One primary hydrology indicator present. Primary source of hydrology is precipitation and proximity to Wetland 045.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 4, 2020
Wetland: w-bl-20200604-01	Rater: BL, SM

2	2
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)

Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input checked="" type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

5	3
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)

2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

12	7
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)

3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<u>(select one or double check & average)</u>	
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> dike	<input checked="" type="checkbox"/> filling/grading
<input checked="" type="checkbox"/> tile	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other - list

19	7
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed	
<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input checked="" type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 4, 2020
Wetland: w-bl-20200604-01	Rater: BL, SM

19 subtotal first page

19 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

21 2

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
0	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
x	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

21 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 045	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 045	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 045	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 045	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 045	
Date: June 4, 2020	
Description: PEM wetland Category 1 Soil Pit	

Wetland 046

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200604-02
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): flat

Slope (%): 2 Lat: 39.85781 Long: -82.20495 Datum: NAD 83

Soil Map Unit Name: No - Nolin silt loam, 0 to 3 percent slopes, occasionally 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? 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point for PEM Wetland 046. Wetland located on the LDB floodplain terrace of Turkey Run (Stream 046). Wetland area appears to be a berm of Turkey Run's LDB due to prior dredging/stratening of stream. Delineated wetland is open ended and continues SW outside the survey corridor.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1. <u>Juglans nigra</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u>5</u> =Total Cover	<u> </u>	<u> </u>																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x 2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>7</u></td> <td>x 5 = <u>35</u></td> </tr> <tr> <td>Column Totals: <u>137</u> (A)</td> <td><u>410</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.99</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>7</u>	x 5 = <u>35</u>	Column Totals: <u>137</u> (A)	<u>410</u> (B)	Prevalence Index = B/A = <u>2.99</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
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Column Totals: <u>137</u> (A)	<u>410</u> (B)																			
Prevalence Index = B/A = <u>2.99</u>																				
1. <u>Sambucus nigra</u>	<u>2</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Rubus occidentalis</u>	<u>2</u>	<u>Yes</u>	<u>UPL</u>																	
3. <u>Juglans nigra</u>	<u>2</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u>6</u> =Total Cover	<u> </u>	<u> </u>																	
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Valerianella umbilicata</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Erigeron philadelphicus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Trifolium pratense</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Agrostis gigantea</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
5. <u>Cirsium arvense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Poa pratensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
7. <u>Daucus carota</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
8. <u>Phalaris arundinacea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
9. <u>Melilotus officinalis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
10. <u>Solidago altissima</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
	<u>126</u> =Total Cover	<u> </u>	<u> </u>																	
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
	<u> </u> =Total Cover	<u> </u>	<u> </u>																	
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as prevalence index < 3.0. Dominant species are FACW, FAC, FACU and UPL.																				

VEGETATION Continued – Use scientific names of plants.

Sampling Point: w-bl-20200604-02

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
	5	=Total Cover		
<u>Sapling/Shrub Stratum</u>				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
	6	=Total Cover		
<u>Herb Stratum</u>				
11. <i>Packera aurea</i>	5	No	FACW	
12. <i>Bromus inermis</i>	5	No	FACU	
13. <i>Rumex crispus</i>	3	No	FAC	
14. <i>Lolium perenne</i>	3	No	FACU	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
	126	=Total Cover		
<u>Woody Vine Stratum</u>				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____	=Total Cover		
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 (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2	100					Loamy/Clayey	silty clay loam
4-10	10YR 4/2	90	10YR 4/6	10	C	PL	Loamy/Clayey	silty clay loam and gravel present

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	³ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Surveyors dug several soil pits in the area; all had restrictive gravel layer 10" below surface. Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 One primary and two secondary hydrology indicators present. Primary sources of hydrology are overbank flow from perennial Stream 046 and concentration of precipitation in geomorphic position. Wetland abuts perennial stream Turkey Run that flows north to Jonathan Creek that flows east to Moxahala Creek that flows north to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200604-02
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): toe slope Local relief (concave, convex, none): concave

Slope (%): 10 Lat: 39.85792 Long: -82.20501 Datum: NAD 83

Soil Map Unit Name: DmF - Dekalb loam, 40 to 70 percent slopes, very stony 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 x, 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? Yes <u> </u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>x</u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: Upland 047 is point out to Wetland 046. Located approximately 20' east of wetland boundary, across gravel drive at higher elevation, at edge of mapped 100-year floodplain and toe of slope. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>63</u></td> <td>x 2 = <u>126</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>48</u></td> <td>x 4 = <u>192</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>131</u> (A)</td> <td><u>378</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.89</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>63</u>	x 2 = <u>126</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>48</u>	x 4 = <u>192</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>131</u> (A)	<u>378</u> (B)	Prevalence Index = B/A = <u>2.89</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>5</u>	x 1 = <u>5</u>																				
FACW species <u>63</u>	x 2 = <u>126</u>																				
FAC species <u>10</u>	x 3 = <u>30</u>																				
FACU species <u>48</u>	x 4 = <u>192</u>																				
UPL species <u>5</u>	x 5 = <u>25</u>																				
Column Totals: <u>131</u> (A)	<u>378</u> (B)																				
Prevalence Index = B/A = <u>2.89</u>																					
1. <u>Quercus muehlenbergii</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Rosa multiflora</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Rubus occidentalis</u>		<u>5</u>	<u>No</u>	<u>UPL</u>																	
4. <u>Carya ovata</u>		<u>3</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Fraxinus americana</u>		<u>3</u>	<u>No</u>	<u>FACU</u>																	
		<u>31</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Valerianella umbilicata</u>		<u>40</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Bromus inermis</u>		<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Solidago gigantea</u>		<u>15</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Poa pratensis</u>		<u>10</u>	<u>No</u>	<u>FAC</u>																	
5. <u>Galium asprellum</u>		<u>5</u>	<u>No</u>	<u>OBL</u>																	
6. <u>Verbesina alternifolia</u>		<u>5</u>	<u>No</u>	<u>FACW</u>																	
7. <u>Elymus riparius</u>		<u>3</u>	<u>No</u>	<u>FACW</u>																	
8. <u>Asclepias syriaca</u>		<u>2</u>	<u>No</u>	<u>FACU</u>																	
9.																					
10.																					
		<u>100</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as Prevalence index < 3.0. Dominant species are FACW and FACU.																					

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 4/2	100					Loamy/Clayey	Silty Clay Loam
7-12	10YR 4/3	90	10YR 4/6	10	C	M	Loamy/Clayey	Silty Clay Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____

 Hydric Soil Present? Yes _____ No X
Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Shovel refusal at 12" depth due to hard pack gravel. No hydric soil indicators present, low chroma/high value matrix without required redox concentrations.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> 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 <u>X</u>	Depth (inches): _____

 (includes capillary fringe)

 Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

One secondary hydrology indicator present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 4, 2020
Wetland: w-bl-20200604-02	Rater: BL, SM

1	1
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input checked="" type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

5	4
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

15	10
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input checked="" type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.(select one or double check & average)

<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input checked="" type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other- list

22	7
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 4, 2020
Wetland: w-bl-20200604-02	Rater: BL, SM

22 subtotal first page

22	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

24	2
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
2	Emergent
0	Shrub
0	Forest
0	Mudflats
0	Open water
0	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input checked="" type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input checked="" type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)**

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 046	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 046	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 046	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 046	
Date: June 4, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 046	
Date: June 4, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200604-05
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave

Slope (%): 2 Lat: 39.85904 Long: -82.20637 Datum: NAD 83

Soil Map Unit Name: WmE - Westmoreland silt loam, 25 to 35 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point in for Wetland 047, located on LDB terrace of intermittent Stream 047 from toe of slope to overflow channel and swale. Wetland fully delineated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>28</u></td> <td>x 1 = <u>28</u></td> </tr> <tr> <td>FACW species <u>52</u></td> <td>x 2 = <u>104</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>120</u> (A)</td> <td><u>282</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.35</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>28</u>	x 1 = <u>28</u>	FACW species <u>52</u>	x 2 = <u>104</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>120</u> (A)	<u>282</u> (B)	Prevalence Index = B/A = <u>2.35</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>28</u>	x 1 = <u>28</u>																				
FACW species <u>52</u>	x 2 = <u>104</u>																				
FAC species <u>10</u>	x 3 = <u>30</u>																				
FACU species <u>30</u>	x 4 = <u>120</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>120</u> (A)	<u>282</u> (B)																				
Prevalence Index = B/A = <u>2.35</u>																					
1. <u>Acer negundo</u>		<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Rosa multiflora</u>		<u>3</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Lindera benzoin</u>		<u>2</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Gleditsia triacanthos</u>		<u>2</u>	<u>No</u>	<u>FACU</u>																	
5. <u> </u>																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Valerianella umbilicata</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Poa palustris</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Galium aparine</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Carex lurida</u>		<u>10</u>	<u>No</u>	<u>OBL</u>																	
5. <u>Dichanthelium clandestinum</u>		<u>10</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Juncus effusus</u>		<u>10</u>	<u>No</u>	<u>OBL</u>																	
7. <u>Equisetum hyemale</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																	
8. <u>Panicum virgatum</u>		<u>5</u>	<u>No</u>	<u>FAC</u>																	
9. <u>Boehmeria cylindrica</u>		<u>5</u>	<u>No</u>	<u>OBL</u>																	
10. <u>Eupatorium perfoliatum</u>		<u>3</u>	<u>No</u>	<u>OBL</u>																	
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%. Dominant species are FACW, FAC and FACU.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 4/1	95	10YR 4/3	5	C	PL	Loamy/Clayey	silty clay loam
9-19	10YR 5/2	90	10YR 4/4	10	C	M	Sandy	gravelly

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> 0 </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 7 </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 0 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are overbank flow from intermittent Stream 047 and concentration of precipitation. Wetland abuts intermittent Stream 047 that flows east to Turkey Run that flows north to Jonathan Creek that flows east to Moxahala Creek that flows north to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200604-09
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): flat

Slope (%): 2 Lat: 39.85898 Long: -82.20631 Datum: NAD 83

Soil Map Unit Name: WmE - Westmoreland silt loam, 25 to 35 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 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upland 048 point out to wetland 047, located approximately 10 feet east of wetland boundary, near toe of slope on bank of intermittent stream 047. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>33</u></td> <td>x 3 = <u>99</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>128</u> (A)</td> <td><u>354</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.77</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>33</u>	x 3 = <u>99</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>128</u> (A)	<u>354</u> (B)	Prevalence Index = B/A = <u>2.77</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>5</u>	x 1 = <u>5</u>																				
FACW species <u>55</u>	x 2 = <u>110</u>																				
FAC species <u>33</u>	x 3 = <u>99</u>																				
FACU species <u>35</u>	x 4 = <u>140</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>128</u> (A)	<u>354</u> (B)																				
Prevalence Index = B/A = <u>2.77</u>																					
1. <u>Rosa multiflora</u>		<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Carpinus caroliniana</u>		<u>3</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		<u>8</u> =Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Poa palustris</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Dichanthelium clandestinum</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Asclepias syriaca</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Apocynum cannabinum</u>		<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
5. <u>Galium aparine</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
6. <u>Geum aleppicum</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																	
7. <u>Impatiens pallida</u>		<u>10</u>	<u>No</u>	<u>FAC</u>																	
8. <u>Boehmeria cylindrica</u>		<u>5</u>	<u>No</u>	<u>OBL</u>																	
9. <u>Solidago gigantea</u>		<u>5</u>	<u>No</u>	<u>FACW</u>																	
10. <u>Symphytotrichum prenanthoides</u>		<u>5</u>	<u>No</u>	<u>FAC</u>																	
		<u>120</u> =Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%. Dominant species are FACW, FAC and FACU.																					

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 5/3	80	10YR 4/2	20	D	M	Loamy/Clayey	Silty Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- ☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)
☐ Black Histic (A3) ☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4) ☐ Dark Surface (S7)
☐ Stratified Layers (A5) ☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10) ☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3) ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)
☐ Saturation (A3) ☐ True Aquatic Plants (B14)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8) ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ 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 _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

One secondary hydrology indicator present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project**Date:** June 4, 2020**Wetland:** w-bl-20200604-05**Rater:** BL, SM

0 0

Subtotal Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

9 9

Subtotal Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

30 21

Subtotal Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3d. Duration inundation/saturation.(select one or double check & average)

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ ditch ☐ point source (nonstormwater)
- ☐ dike ☐ filling/grading
- ☐ tile ☐ road bed/RR track
- ☐ weir ☐ dredging
- ☐ stormwater input ☐ other- list

38 8

Subtotal Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

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

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select one.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

Check all disturbances observed

- ☒ mowing ☐ shrub/sapling removal
- ☐ grazing ☐ herbaceous/aquatic bed removal
- ☐ clearcutting ☒ sedimentation
- ☐ selective cutting ☐ dredging
- ☐ woody debris removal ☐ farming
- ☐ toxic pollutants ☐ nutrient enrichment

38 subtotal this page

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 4, 2020
Wetland: w-bl-20200604-05	Rater: BL, SM

38 subtotal first page

38	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

43	5
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
1	Emergent
0	Shrub
0	Forest
0	Mudflats
0	Open water
	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
x	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

43 **GRAND TOTAL (max 100 pts)**

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 047	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 047	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 047	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 047	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 047	
Date: June 4, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200604-03a
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W
 Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): concave
 Slope (%): 5 Lat: 39.86205 Long: -82.2093 Datum: NAD 83
 Soil Map Unit Name: WhC Wellston silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point in for Wetland 048a, PEM component of PEM/PFO complex, on hillslope in ROW southwest of PFO portion. Entire wetland delineated. Wetland is isolated; drains downslope to the northeast, no surface water feature present.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>95</u></td> <td>x 2 = <u>190</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>14</u></td> <td>x 4 = <u>56</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>160</u> (A)</td> <td><u>301</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.88</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>95</u>	x 2 = <u>190</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>14</u>	x 4 = <u>56</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>160</u> (A)	<u>301</u> (B)	Prevalence Index = B/A = <u>1.88</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>50</u>	x 1 = <u>50</u>																				
FACW species <u>95</u>	x 2 = <u>190</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>14</u>	x 4 = <u>56</u>																				
UPL species <u>1</u>	x 5 = <u>5</u>																				
Column Totals: <u>160</u> (A)	<u>301</u> (B)																				
Prevalence Index = B/A = <u>1.88</u>																					
1. <u>Prunus serotina</u>	<u>1</u>	No	FACU																		
2. <u>Rubus occidentalis</u>	<u>1</u>	No	UPL																		
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Onoclea sensibilis</u>	<u>75</u>	Yes	FACW																		
2. <u>Acorus calamus</u>	<u>30</u>	Yes	OBL																		
3. <u>Dichanthelium clandestinum</u>	<u>20</u>	No	FACW																		
4. <u>Juncus effusus</u>	<u>20</u>	No	OBL																		
5. <u>Poa pratensis</u>	<u>10</u>	No	FACU																		
6. <u>Asclepias syriaca</u>	<u>3</u>	No	FACU																		
7.																					
8.																					
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test. Dominant species are OBL and FACW.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/1	98	10YR 4/6	2	C	PL	Loamy/Clayey	silty clay loam
4-9	2.5YR 5/2	90	2.5YR 4/4	10	C	PL	Loamy/Clayey	sandy clay loam
9-17	2.5YR 5/6	60	2.5YR 5/2	40	D	M	Loamy/Clayey	sandy clay loam, mixed matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> ? Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
Hydric soil indicators present as low chroma/high value depleted matrix with redox concentrations in pore linings, in closed depression subject to ponding, with distinct hydrogen sulfide odor present.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland drains to northeast outside study area, no defined drainage feature present, potentially isolated.

Wetland 048b

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200604-03b
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 39.86215 Long: -82.20927 Datum: NAD 83

Soil Map Unit Name: WhC - Wellston silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Wetland 048b sampling point for PFO component of Wetland 048, east of PEM component). Entire wetland delineated. Wetland is isolated; drains downslope to the north, no surface water feature present.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Prunus serotina</u>	30	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62.5%</u> (A/B)																																								
2. <u>Quercus palustris</u>	20	Yes	FACW																																									
3. <u>Carya glabra</u>	20	Yes	FACU																																									
4. <u> </u>																																												
5. <u> </u>																																												
	70	=Total Cover																																										
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Ligustrum vulgare</u>	30	Yes	FACU	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td style="text-align: center;">0</td> <td>x 1 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">75</td> <td>x 2 =</td> <td style="text-align: center;">150</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">33</td> <td>x 3 =</td> <td style="text-align: center;">99</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">85</td> <td>x 4 =</td> <td style="text-align: center;">340</td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td>x 5 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">193</td> <td></td> <td style="text-align: center;">589</td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A =</td> <td style="text-align: center;">3.05</td> </tr> </table>	Total % Cover of:		Multiply by:			OBL species	0	x 1 =	0		FACW species	75	x 2 =	150		FAC species	33	x 3 =	99		FACU species	85	x 4 =	340		UPL species	0	x 5 =	0		Column Totals:	193		589	(B)	Prevalence Index = B/A =				3.05
Total % Cover of:		Multiply by:																																										
OBL species	0	x 1 =	0																																									
FACW species	75	x 2 =	150																																									
FAC species	33	x 3 =	99																																									
FACU species	85	x 4 =	340																																									
UPL species	0	x 5 =	0																																									
Column Totals:	193		589	(B)																																								
Prevalence Index = B/A =				3.05																																								
2. <u>Cornus racemosa</u>	10	Yes	FAC																																									
3. <u>Fraxinus pennsylvanica</u>	10	Yes	FACW																																									
4. <u>Lindera benzoin</u>	5	No	FACW																																									
5. <u>Carpinus caroliniana</u>	3	No	FAC																																									
	60	=Total Cover																																										
Herb Stratum (Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Packera aurea</u>	30	Yes	FACW	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2. <u>Juncus tenuis</u>	20	Yes	FAC																																									
3. <u>Geum aleppicum</u>	5	No	FACW																																									
4. <u>Agrimonia parviflora</u>	5	No	FACW																																									
5. <u>Persicaria virginiana</u>	3	No	FACU																																									
6. <u> </u>																																												
7. <u> </u>																																												
8. <u> </u>																																												
9. <u> </u>																																												
10. <u> </u>																																												
	63	=Total Cover																																										
Woody Vine Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
2. <u> </u>																																												
		=Total Cover																																										
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%. Dominant species are FACW, FAC and FACU																																												

VEGETATION Continued – Use scientific names of plants.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
	70	=Total Cover	
<u>Sapling/Shrub Stratum</u>			
6. <i>Rosa multiflora</i>	2	No	FACU
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
	60	=Total Cover	
<u>Herb Stratum</u>			
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____
21. _____	_____	_____	_____
22. _____	_____	_____	_____
	63	=Total Cover	
<u>Woody Vine Stratum</u>			
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
		=Total Cover	

Definitions of Vegetation Strata:

Tree – 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 and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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 (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	80	7.5YR 4/4	20	C	PL/M	Loamy/Clayey	clay loam
6-12	10YR 5/1	60	7.5YR 5/6	40	C	M	Loamy/Clayey	silty clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)
³ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value depleted matrix with redox concentrations in pore linings, in closed depression subject to ponding, with distinct hydrogen sulfide odor present.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 1 </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 7 </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 0 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland drains to northeast outside study area, no defined drainage feature present, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200604-06
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W
 Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex
 Slope (%): 10 Lat: 39.86204 Long: -82.20941 Datum: NAD 83
 Soil Map Unit Name: WhC - Wellston silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 050 point out to wetland 048. Located approximately 5' south of wetland boundary, upslope where drainage comes from. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>3</u></td> <td>x 5 = <u>15</u></td> </tr> <tr> <td>Column Totals: <u>113</u> (A)</td> <td><u>255</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.26</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>3</u>	x 5 = <u>15</u>	Column Totals: <u>113</u> (A)	<u>255</u> (B)	Prevalence Index = B/A = <u>2.26</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>100</u>	x 2 = <u>200</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>10</u>	x 4 = <u>40</u>																				
UPL species <u>3</u>	x 5 = <u>15</u>																				
Column Totals: <u>113</u> (A)	<u>255</u> (B)																				
Prevalence Index = B/A = <u>2.26</u>																					
1. <u>Rubus occidentalis</u>		<u>3</u>	<u>No</u>	<u>UPL</u>																	
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Dichanthelium clandestinum</u>		<u>60</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Onoclea sensibilis</u>		<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Asclepias syriaca</u>		<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Cyperus strigosus</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																	
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			

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

Hydrophytic vegetation indicator present as dominance test > 50%. Dominant species are FACW.

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 4/3	100					Loamy/Clayey	Silty Loam
7-17	10YR 5/3	80	10YR 5/6	20	C	M	Loamy/Clayey	Silty Clay Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X
Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> 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 <u>X</u>	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

One secondary hydrology indicator present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project**Date:** June 4, 2020**Wetland:** w-bl-20200604-03ab**Rater:** BL, SM

0 0

Subtotal Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

12 12

Subtotal Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

23 11

Subtotal Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3d. Duration inundation/saturation.(select one or double check & average)

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ ditch ☐ point source (nonstormwater)
- ☐ dike ☐ filling/grading
- ☐ tile ☐ road bed/RR track
- ☐ weir ☐ dredging
- ☐ stormwater input ☒ other - list

33 10

Subtotal Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

other - strip mining

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

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

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select one.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☒ Fair (3)
- ☐ Poor to fair (2)
- ☐ Poor (1)

Check all disturbances observed

- ☒ mowing ☐ shrub/sapling removal
- ☐ grazing ☐ herbaceous/aquatic bed removal
- ☒ clearcutting ☐ sedimentation
- ☐ selective cutting ☐ dredging
- ☐ woody debris removal ☐ farming
- ☐ toxic pollutants ☐ nutrient enrichment

33 subtotal this page

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 4, 2020
Wetland: w-bl-20200604-03ab	Rater: BL, SM

33 subtotal first page

33	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

39	6
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
2	Emergent
0	Shrub
0	Forest
0	Mudflats
0	Open water
	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
x	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
1	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

39 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 048a	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 048a	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 048a	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 048a	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 048a	
Date: June 4, 2020	
Description: PEM wetland Category 2 Soil Pit	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 048b	
Date: June 4, 2020	
Description: PFO wetland Category 2 Facing North	

Wetland 048b	
Date: June 4, 2020	
Description: PFO wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 048b	
Date: June 4, 2020	
Description: PFO wetland Category 2 Facing South	

Wetland 048b	
Date: June 4, 2020	
Description: PFO wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 048b	
Date: June 4, 2020	
Description: PFO wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200604-04
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave

Slope (%): 15 Lat: 39.86369 Long: -82.21107 Datum: NAD 83

Soil Map Unit Name: WmE - Westmoreland silt loam, 25 to 35 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point for Wetland 049, within constructed drainage ditch on hillside. Upland drainage features drain in and out of the wetland, ultimately draining west to intermittent Stream 048. Wetland fully delineated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>33</u></td> <td>x 1 = <u>33</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>13</u></td> <td>x 3 = <u>39</u></td> </tr> <tr> <td>FACU species <u>7</u></td> <td>x 4 = <u>28</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>83</u> (A)</td> <td><u>190</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.29</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>33</u>	x 1 = <u>33</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>13</u>	x 3 = <u>39</u>	FACU species <u>7</u>	x 4 = <u>28</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>83</u> (A)	<u>190</u> (B)	Prevalence Index = B/A = <u>2.29</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>33</u>	x 1 = <u>33</u>																				
FACW species <u>20</u>	x 2 = <u>40</u>																				
FAC species <u>13</u>	x 3 = <u>39</u>																				
FACU species <u>7</u>	x 4 = <u>28</u>																				
UPL species <u>10</u>	x 5 = <u>50</u>																				
Column Totals: <u>83</u> (A)	<u>190</u> (B)																				
Prevalence Index = B/A = <u>2.29</u>																					
1. <u>Rubus occidentalis</u>		<u>10</u>	Yes	UPL																	
2. <u>Ulmus rubra</u>		<u>3</u>	Yes	FAC																	
3.																					
4.																					
5.																					
		<u>15</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex lurida</u>		<u>30</u>	Yes	OBL																	
2. <u>Parathelypteris noveboracensis</u>		<u>10</u>	Yes	FAC																	
3. <u>Onoclea sensibilis</u>		<u>10</u>	Yes	FACW																	
4. <u>Dichanthelium clandestinum</u>		<u>10</u>	Yes	FACW																	
5. <u>Juncus effusus</u>		<u>5</u>	No	FACU																	
6. <u>Eupatorium perfoliatum</u>		<u>3</u>	No	OBL																	
7.																					
8.																					
9.																					
10.																					
		<u>68</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%. Dominant species are OBL, FACW, FAC and UPL.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	2.5YR 5/2	100					Loamy/Clayey	silty clay loam
1-19	5GY 5/1	80	10Y 4/1	20	D	M	Loamy/Clayey	clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value depleted and gleyed matrix.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland adjacent to intermittent Stream 048 via grassy drainage swale, that flows north outside of study area to NHD mapped stream that flows east to Turkey Run that flows north to Jonathan Creek that flows east to Moxahala Creek that flows north to Muskingum River, a

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/04/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200604-07
 Investigator(s): SM, BL Section, Township, Range: S 20 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 15 Lat: 39.86368 Long: -82.21101 Datum: NAD 83

Soil Map Unit Name: WmE - Westmoreland silt loam, 25 to 35 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 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 <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 051, point out to wetland 049. Located approximately 5' west of wetland boundary on slope. Not a wetland point as hydrophytic vegetation and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>30</u></td><td>x 2 = <u>60</u></td></tr> <tr><td>FAC species <u>10</u></td><td>x 3 = <u>30</u></td></tr> <tr><td>FACU species <u>15</u></td><td>x 4 = <u>60</u></td></tr> <tr><td>UPL species <u>60</u></td><td>x 5 = <u>300</u></td></tr> <tr><td>Column Totals: <u>115</u> (A)</td><td><u>450</u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A = <u>3.91</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>60</u>	x 5 = <u>300</u>	Column Totals: <u>115</u> (A)	<u>450</u> (B)	Prevalence Index = B/A = <u>3.91</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>30</u>	x 2 = <u>60</u>																				
FAC species <u>10</u>	x 3 = <u>30</u>																				
FACU species <u>15</u>	x 4 = <u>60</u>																				
UPL species <u>60</u>	x 5 = <u>300</u>																				
Column Totals: <u>115</u> (A)	<u>450</u> (B)																				
Prevalence Index = B/A = <u>3.91</u>																					
1. <u>Rubus occidentalis</u>	<u>15</u>	Yes	UPL																		
2. <u>Betula alleghaniensis</u>	<u>5</u>	Yes	FAC																		
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Dichanthelium clandestinum</u>	<u>20</u>	Yes	FACW																		
2. <u>Potentilla canadensis</u>	<u>20</u>	Yes	UPL																		
3. <u>Achillea millefolium</u>	<u>15</u>	Yes	FACU																		
4. <u>Leucanthemum vulgare</u>	<u>15</u>	Yes	UPL																		
5. <u>Agrostis gigantea</u>	<u>10</u>	No	FACW																		
6. <u>Polystichum acrostichoides</u>	<u>10</u>	No	UPL																		
7. <u>Panicum virgatum</u>	<u>5</u>	No	FAC																		
8. <u> </u>																					
9. <u> </u>																					
10. <u> </u>																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
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 (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/3	100					Loamy/Clayey	Silty Loam
4-17	2.5Y 6/2	80	2.5Y 5/6	20	C	M	Loamy/Clayey	Silty Clay Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> ? Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present?Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as low chroma/high value depleted matrix.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 4, 2020
Wetland: w-bl-20200604-04	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☒ <0.1 acres (0.04ha) (0 pts)

12	12
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

24	12
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
☐ Other groundwater (3)
☒ Precipitation (1)
☐ Seasonal/Intermittent surface water (3)
☐ Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
☐ Between stream/lake and other human use (1)
☒ Part of wetland/upland (e.g. forest), complex (1)
☐ Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

- ☐ >0.7 (27.6in) (3)
☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
☒ <0.4m (<15.7in) (1)

3d. Duration inundation/saturation.(select one or double check & average)

- ☐ Semi- to permanently inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☐ Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

- ☐ None or none apparent (12)
☒ Recovered (7)
☐ Recovering (3)
☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ ditch
☐ dike
☐ tile
☐ weir
☐ stormwater input
☐ point source (nonstormwater)
☒ filling/grading
☐ road bed/RR track
☐ dredging
☒ other - list

32	8
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

other - strip mining

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
☐ Recovered (3)
☐ Recovering (2)
☐ Recent or no recovery (1)

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

- ☐ None or none apparent (9)
☐ Recovered (6)
☒ Recovering (3)
☐ Recent or no recovery (1)

4b. Habitat development. Select one.

- ☐ Excellent (7)
☐ Very good (6)
☐ Good (5)
☐ Moderately good (4)
☐ Fair (3)
☐ Poor to fair (2)
☒ Poor (1)

Check all disturbances observed

- ☒ mowing
☐ grazing
☐ clearcutting
☐ selective cutting
☐ woody debris removal
☐ toxic pollutants
☐ shrub/sapling removal
☐ herbaceous/aquatic bed removal
☐ sedimentation
☐ dredging
☐ farming
☐ nutrient enrichment

32	subtotal this page
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Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 4, 2020
Wetland: w-bl-20200604-04	Rater: BL, SM

32 subtotal first page

32	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

36	4
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
1	Emergent
0	Shrub
0	Forest
0	Mudflats
0	Open water
0	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input checked="" type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input checked="" type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

36 **GRAND TOTAL (max 100 pts)**

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 049	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 049	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 049	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 049	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 049	
Date: June 4, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200605-02
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 15 Lat: 39.87583 Long: -82.22440 Datum: NAD 83

Soil Map Unit Name: WmE- Westmoreland silt loam, 25 to 35 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point (w-bl-20200605-02) in for Wetland 050. Wetland is a hillside seep area in fenced pasture, drains to intermittent Stream 051. Wetland fully delineated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																
1.																																					
2.																																					
3.																																					
4.																																					
5.																																					
		=Total Cover			Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>30</u></td> <td>x 1 =</td> <td><u>30</u></td> </tr> <tr> <td>FACW species</td> <td><u>80</u></td> <td>x 2 =</td> <td><u>160</u></td> </tr> <tr> <td>FAC species</td> <td><u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>110</u> (A)</td> <td></td> <td><u>190</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>1.73</u></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:		OBL species	<u>30</u>	x 1 =	<u>30</u>	FACW species	<u>80</u>	x 2 =	<u>160</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>110</u> (A)		<u>190</u> (B)	Prevalence Index = B/A = <u>1.73</u>			
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Prevalence Index = B/A = <u>1.73</u>																																					
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Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																					
1.																																					
2.																																					
3.																																					
4.																																					
5.																																					
		=Total Cover																																			
Herb Stratum (Plot size: <u>5'</u>)																																					
1.	<u>Poa palustris</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																																	
2.	<u>Agrostis gigantea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																																	
3.	<u>Leersia virginica</u>	<u>20</u>	<u>No</u>	<u>FACW</u>																																	
4.	<u>Carex lupulina</u>	<u>15</u>	<u>No</u>	<u>OBL</u>																																	
5.	<u>Juncus effusus</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																																	
6.	<u>Eupatorium perfoliatum</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																																	
7.																																					
8.																																					
9.																																					
10.																																					
		<u>110</u>	=Total Cover																																		
Woody Vine Stratum (Plot size: <u>30'</u>)																																					
1.																																					
2.																																					
		=Total Cover																																			
Hydrophytic Vegetation Indicators: <u>x</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																					
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL and FACW.																																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/2	90	10YR 4/3	10	C	M	Loamy/Clayey	silty clay loam
5-16	5Y 4/1	90	5Y 4/3	10	C	PL	Loamy/Clayey	silty clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value matrix layers with redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 1 </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 0 </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 0 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are groundwater seepage observed and concentration of precipitation and surface runoff in geomorphic position. Wetland abuts intermittent Stream 051 that flows north to Jonathan Creek that flows east to Moxahala Creek that flows east to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200605-03
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 15 Lat: 39.87589 Long: -82.22443 Datum: NAD 83

Soil Map Unit Name: WmE- Westmoreland silt loam, 25 to 35 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 054 point out to Wetland 050, approximately 15' west of wetland boundary, located in fenced pasture. Not a wetland point as no wetland criteria met	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>58</u></td> <td>x 4 = <u>232</u></td> </tr> <tr> <td>UPL species <u>35</u></td> <td>x 5 = <u>175</u></td> </tr> <tr> <td>Column Totals: <u>106</u> (A)</td> <td><u>440</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.15</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>58</u>	x 4 = <u>232</u>	UPL species <u>35</u>	x 5 = <u>175</u>	Column Totals: <u>106</u> (A)	<u>440</u> (B)	Prevalence Index = B/A = <u>4.15</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>3</u>	x 1 = <u>3</u>																				
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		=Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Bromus secalinus</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>																	
2.	<u>Andropogon virginicus</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Dactylis glomerata</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4.	<u>Bromus inermis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5.	<u>Xanthium strumarium</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
6.	<u>Daucus carota</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
7.	<u>Solidago altissima</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
8.	<u>Eupatorium perfoliatum</u>	<u>3</u>	<u>No</u>	<u>OBL</u>																	
9.	<u>Asclepias syriaca</u>	<u>3</u>	<u>No</u>	<u>FACU</u>																	
10.																					
		<u>106</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.																					
2.																					
		=Total Cover																			
Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																					
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominance test < 50%, prevalence index > 3.0. dominant species are FACU and UPL.																					

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/2	100					Loamy/Clayey	silty clay loam
5-13	10YR 5/6	100					Loamy/Clayey	sandy silt

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____

 Hydric Soil Present? Yes _____ No X
Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present. Low chroma/high value matrix without required redox concentrations.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> 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 <u>X</u>	Depth (inches): _____
(includes capillary fringe)			

 Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-02	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17	16
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input checked="" type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input checked="" type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input checked="" type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input checked="" type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

25	8
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input checked="" type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Wetland 050

ORAM v. 5.0 Field Form Quantitative Rating

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-02	Rater: BL, SM

25	subtotal first page
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25	0
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Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

31	6
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Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	0	Aquatic bed
<input type="checkbox"/>	2	Emergent
<input type="checkbox"/>	0	Shrub
<input type="checkbox"/>	0	Forest
<input type="checkbox"/>	0	Mudflats
<input type="checkbox"/>	0	Open water
<input type="checkbox"/>		Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input checked="" type="checkbox"/>	x None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input checked="" type="checkbox"/>	x Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

<input type="checkbox"/>	2	Vegetated hummocks/tussocks
<input type="checkbox"/>	1	Coarse woody debris >15 cm (6")
<input type="checkbox"/>	0	Standing dead > 25 cm (10") dbh
<input type="checkbox"/>	0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)
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Provisional Wetland Category:

Modified Category 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 050	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 050	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 050	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 050	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 050	
Date: June 5, 2020	
Description: PEM wetland Category 2 Soil Pit	

Wetland 051

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200605-03
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave

Slope (%): 2 Lat: 39.87621 Long: -82.22411 Datum: NAD83

Soil Map Unit Name: WmE- Westmoreland silt loam, 25 to 35 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point (w-bl-20200605-03) in for PEM Wetland 051. Wetland located on LDB of intermittent stream 051. Wetland boundary delineated by topography, extends to north outside study area.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover			Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>48</u></td> <td>x 2 = <u>96</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>98</u> (A)</td> <td><u>241</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.46</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>48</u>	x 2 = <u>96</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>98</u> (A)	<u>241</u> (B)	Prevalence Index = B/A = <u>2.46</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>15</u>	x 1 = <u>15</u>																				
FACW species <u>48</u>	x 2 = <u>96</u>																				
FAC species <u>10</u>	x 3 = <u>30</u>																				
FACU species <u>25</u>	x 4 = <u>100</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>98</u> (A)	<u>241</u> (B)																				
Prevalence Index = B/A = <u>2.46</u>																					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u>Poa palustris</u>		30	Yes	FACW																	
2. <u>Carex lupulina</u>		15	Yes	OBL																	
3. <u>Agrostis gigantea</u>		15	Yes	FACW																	
4. <u>Bromus inermis</u>		10	No	FACU																	
5. <u>Xanthium strumarium</u>		10	No	FAC																	
6. <u>Schedonorus arundinaceus</u>		10	No	FACU																	
7. <u>Dactylis glomerata</u>		5	No	FACU																	
8. <u>Packera aurea</u>		3	No	FACW																	
9. <u> </u>																					
10. <u> </u>																					
		98 =Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)
 hydrophytic vegetation indicator present as dominance test > 50%, dominant species are OBL and FACW.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 4/3	70	10YR 4/2	30	C	M	Loamy/Clayey	silty clay loam
7-14	5Y 4/2	90	5Y 3/1	5	D	M	Loamy/Clayey	silty clay loam
			5Y 4/4	5	C	PL		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are groundwater seepage observed and concentration of precipitation and surface runoff in geomorphic position. Wetland abuts intermittent Stream 051 that flows north to Jonathan Creek that flows east to Moxahala Creek that flows east to Muskingum River, a TNW.

Upland 055

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200605-04
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): none

Slope (%): 2 Lat: 39.87628 Long: -82.22417 Datum: NAD 83

Soil Map Unit Name: WmE- Westmoreland silt loam, 25 to 35 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 055 point out to Wetland 051, approximately 15' west of wetland boundary on terrace. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)																
1. <u>Prunus serotina</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Juglans nigra</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>35</u> =Total Cover				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>120</u></td> <td>x 4 = <u>480</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u> (A)</td> <td><u>540</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.86</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>120</u>	x 4 = <u>480</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u> (A)	<u>540</u> (B)	Prevalence Index = B/A = <u>3.86</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>20</u>	x 3 = <u>60</u>																			
FACU species <u>120</u>	x 4 = <u>480</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>140</u> (A)	<u>540</u> (B)																			
Prevalence Index = B/A = <u>3.86</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Cornus florida</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>5</u> =Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Dactylis glomerata</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Xanthium strumarium</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Bromus inermis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>100</u> =Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u> </u> =Total Cover																				
Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																				
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominance test < 50%, prevalence index >3.0. Dominant species are FAC and FACU																				

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	10YR 4/2	100					Loamy/Clayey	silty to sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
---	--

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present. Low chroma/high value matrix without required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (minimum of two required)</u>			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> 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 <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks: No hydrology indicators present.							

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-03	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

3	3
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

24	21
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input checked="" type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

36	12
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input checked="" type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input checked="" type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-03	Rater: BL, SM

36 subtotal first page

36 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

41 5

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
X	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
1	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
1	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

41 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 051	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 051	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 051	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 051	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 051	
Date: June 5, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200605-04
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 39.87691 Long: -82.22559 Datum: NAD 83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil x, 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point (w-bl-20200605-04) in to PEM Wetland 052. Wetland located on old hillside field drive (possibly disturbed soils). Wetland is fully delineated and potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum	(Plot size: <u>5'</u>)				
1.	<u>Juncus effusus</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>	
2.	<u>Poa palustris</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Leersia virginica</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
4.	<u>Cirsium arvense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
5.	<u>Agrostis gigantea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
6.	<u>Packera aurea</u>	<u>3</u>	<u>No</u>	<u>FACW</u>	
7.					
8.					
9.					
10.					
		<u>113</u> =Total Cover			
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
		=Total Cover			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>50</u>	x 1 = <u>50</u>
FACW species <u>53</u>	x 2 = <u>106</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>113</u> (A)	<u>196</u> (B)
Prevalence Index = B/A = <u>1.73</u>	

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

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

Hydrophytic vegetation indicators present as rapid test, dominant species are OBL and FACW.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/1	95	10YR 4/6	5	C	PL	Loamy/Clayey	silty clay loam
4-16	2.5Y 5/1	80	2.5Y 5/6	20	C	PL/M	Loamy/Clayey	silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:							Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> ? Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> Very Shallow Dark Surface (F22)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input checked="" type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if observed):								
Type: _____								
Depth (inches): _____							Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf) Hydric soil indicators present as low chroma/high value depleted matrix in depressional area, with required redox concentrations.								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one is required; check all that apply)</u>						<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Surface Soil Cracks (B6)		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Aquatic Fauna (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)			<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Gauge or Well Data (D9)					
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Other (Explain in Remarks)					
Field Observations:								
Surface Water Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
Water Table Present?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 12				
Saturation Present?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 6				
(includes capillary fringe)						Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. No outflow to a delineated feature, sheet flow down slope through pasture, potentially isolated.								

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200605-05
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 39.87695 Long: -82.22557 Datum: NAD83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upland 056 point out to Wetland 052, approximately 5' north of wetland boundary at top of slope in pasture. Not a wetland point as hydrophytic vegetation criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.		15	Yes		
3.					
4.					
5.					
		15	=Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
			=Total Cover		
Herb Stratum	(Plot size: <u>5'</u>)				
1.	<u>Cirsium arvense</u>	30	Yes	FACU	
2.	<u>Agrostis gigantea</u>	30	Yes	FACW	
3.	<u>Solidago altissima</u>	20	Yes	FACU	
4.	<u>Bromus inermis</u>	10	No	FACU	
5.	<u>Schedonorus arundinaceus</u>	10	No	FACU	
6.					
7.					
8.					
9.					
10.					
		100	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
			=Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>30</u>	x 2 = <u>60</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>340</u> (B)
Prevalence Index = B/A = <u>3.40</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

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

No hydrophytic vegetation indicators present, dominance test <50%, prevalence index <3.0. Dominant species are FACW and FACU

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 4/2	95	10YR 4/6	5	C	PL	Loamy/Clayey	silty clay loam
7-16	10YR 4/1	95	10YR 3/6	5	C	PL	Loamy/Clayey	silty sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 One primary hydrology indicator present. Primary source of hydrology is Wetland 052 soil saturation migration.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-04	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

11	10
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

18	7
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-04	Rater: BL, SM

18 subtotal first page

18 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

21 3

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

21 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 052	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 052	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 052	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 052	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 052	
Date: June 5, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200605-05
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 10 Lat: 39.8776 Long: -82.22705 Datum: NAD 83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point (w-bl-20200605-05) in to PEM Wetland 053, wet meadow swale located in pasture. Wetland is fully delineated and isolated.	

VEGETATION – Use scientific names of plants.

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Tree Stratum</th> <th style="width: 15%;">(Plot size: <u>30'</u>)</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td><td></td></tr> <tr><td>5.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td>=Total Cover</td> <td></td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Sapling/Shrub Stratum</th> <th style="width: 15%;">(Plot size: <u>15'</u>)</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td><td></td></tr> <tr><td>5.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td>=Total Cover</td> <td></td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Herb Stratum</th> <th style="width: 15%;">(Plot size: <u>5'</u>)</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Carex vulpinoidea</u></td><td></td><td>40</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. <u>Juncus effusus</u></td><td></td><td>20</td><td>Yes</td><td>OBL</td></tr> <tr><td>3. <u>Agrostis gigantea</u></td><td></td><td>20</td><td>Yes</td><td>FACW</td></tr> <tr><td>4. <u>Poa palustris</u></td><td></td><td>10</td><td>No</td><td>FACW</td></tr> <tr><td>5. <u>Bromus ciliatus</u></td><td></td><td>5</td><td>No</td><td>FACW</td></tr> <tr><td>6. <u>Cirsium arvense</u></td><td></td><td>5</td><td>No</td><td>FACU</td></tr> <tr><td>7.</td><td></td><td></td><td></td><td></td></tr> <tr><td>8.</td><td></td><td></td><td></td><td></td></tr> <tr><td>9.</td><td></td><td></td><td></td><td></td></tr> <tr><td>10.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td>100</td> <td>=Total Cover</td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Woody Vine Stratum</th> <th style="width: 15%;">(Plot size: <u>30'</u>)</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td>=Total Cover</td> <td></td> <td></td> </tr> </tbody> </table>	Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	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Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL and FACW.																																																																																																																																																																																																			

SOIL

Sampling Point: bl-20200605-

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/2	100					Loamy/Clayey	silty clay loam
3-17	N 4/	80	10YR 3/6	20	C	PL	Loamy/Clayey	clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)
- ☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)
- ☐ Black Histic (A3) ☐ Stripped Matrix (S6)
- ☐ Hydrogen Sulfide (A4) ☐ Dark Surface (S7)
- ☐ Stratified Layers (A5) ☐ Loamy Mucky Mineral (F1)
- ☐ 2 cm Muck (A10) ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3)
- ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6)
- ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7)
- ☐ 5 cm Mucky Peat or Peat (S3) ☐ ? Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ ? Coast Prairie Redox (A16)
- ☐ Iron-Manganese Masses (F12)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as gleyed matrix, not in a depression subject to ponding.

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)					
<input checked="" type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Aquatic Fauna (B13)		<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> True Aquatic Plants (B14)		<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)		<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Other (Explain in Remarks)			
Field Observations:					
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0.5"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="10"/>	
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>	
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					
Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. No outflow to a delineated feature, sheet flow down slope through grassy swale into flat pasture, potentially isolated.					

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200605-06
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.87778 Long: -82.22706 Datum: NAD 83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upland 057 point out to Wetland 053, approximately 10 feet west of wetland boundary at equal elevation in pasture. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.		15	Yes		
3.					
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5.					
		15	=Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
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			=Total Cover		
Herb Stratum	(Plot size: <u>5'</u>)				
1.	<u>Bromus inermis</u>	60	Yes	FACU	
2.	<u>Phleum pratense</u>	10	No	FACU	
3.	<u>Cirsium arvense</u>	10	No	FACU	
4.	<u>Agrostis gigantea</u>	5	No	FACW	
5.	<u>Xanthium strumarium</u>	5	No	FAC	
6.	<u>Vernonia gigantea</u>	3	No	FAC	
7.					
8.					
9.					
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		93	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
			=Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>8</u>	x 3 = <u>24</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>93</u> (A)	<u>354</u> (B)
Prevalence Index = B/A = <u>3.81</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
 No hydrophytic vegetation indicators present, dominance test <50%, prevalence index >3.0. Dominant species is FACU.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100					Loamy/Clayey	silty clay loam
3-15	2.5Y 5/4	60	10YR 4/2	40	C	M	Loamy/Clayey	sandy silt; dual matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> ? Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present, low chroma/high value matrix without required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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 <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-05	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	15
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input checked="" type="checkbox"/>	(select one or double check & average)
<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

22	6
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-05	Rater: BL, SM

22 subtotal first page

22 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

26 4

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
X	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 053	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 053	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 053	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 053	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 053	
Date: June 5, 2020	
Description: PEM wetland Category 1 Soil Pit	

Wetland 054

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200605-06
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave

Slope (%): 10 Lat: 39.87795 Long: -82.22746 Datum: NAD 83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sampling point (w-bl-20200605-06) in for PEM Wetland 054, wet meadow on hillside in pasture. Wetland fully delineated and potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>250</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.38</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>250</u> (B)	Prevalence Index = B/A = <u>2.38</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>20</u>	x 1 = <u>20</u>																				
FACW species <u>55</u>	x 2 = <u>110</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>30</u>	x 4 = <u>120</u>																				
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Column Totals: <u>105</u> (A)	<u>250</u> (B)																				
Prevalence Index = B/A = <u>2.38</u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)																				
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Carex vulpinoidea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Bromus inermis</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Lysimachia nummularia</u>	<u>20</u>	<u>No</u>	<u>FACW</u>																	
4.	<u>Juncus effusus</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
5.	<u>Scirpus atrovirens</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
6.	<u>Agrostis gigantea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
7.																					
8.																					
9.																					
10.																					
		105 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as prevalence index <3.0. Dominant species are FACW and FACU.																					

SOIL

Sampling Point: bl-20200605-

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	2.5Y 5/1	90	10YR 4/6	10	C	PL	Loamy/Clayey	sandy clay loam
7-16	2.5Y 6/2	90	2.5Y 6/6	10	C	M	Loamy/Clayey	sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> ? Coast Prairie Redox (A16) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix, not in a depression area subject to ponding.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (minimum of two required)</u>			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)		<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)						

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0.5</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>7</u> (includes capillary fringe)				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
--	--	--	--	---	--	--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. No outflow to a delineated feature, sheet flow down slope through grassy swale towards intermittent Stream 052, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200605-07
 Investigator(s): SM, BL Section, Township, Range: S 18 T 17N R 15W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.87802 Long: -82.22745 Datum: NAD 83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 058 point out to Wetland 054 and Wetland 055, representative of ROW area between both wetland boundaries. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>330</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.67</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>90</u> (A)	<u>330</u> (B)	Prevalence Index = B/A = <u>3.67</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>30</u>	x 3 = <u>90</u>																				
FACU species <u>60</u>	x 4 = <u>240</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>90</u> (A)	<u>330</u> (B)																				
Prevalence Index = B/A = <u>3.67</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Bromus inermis</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>																	
2.	<u>Poa pratensis</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>																	
3.	<u>Dactylis glomerata</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4.	<u>Trifolium pratense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
		<u>90</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			

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

No hydrophytic vegetation indicators present, dominance test <50%, prevalence index >3.0. Dominant species are FAC and FACU

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	100					Loamy/Clayey	sandy silty loam
3-15	10YR 4/6	100					Loamy/Clayey	sandy silt

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
---	--

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present, low chroma/high value matrix without required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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 <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-06	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	15
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

22	6
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-06	Rater: BL, SM

22 subtotal first page

22 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

26 4

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
X	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)

Provisional Wetland Category:


Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 054	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 054	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 054	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 054	
Date: June 5, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 054	
Date: June 5, 2020	
Description: PEM wetland Category 1 Soil Pit	

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?	Yes <u> X </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>			
Remarks: Sampling point (w-bl-20200605-07) in for PEM Wetland 055. Wet swale at head of intermittent Stream 052 in pasture. Wetland fully delineated.					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
			=Total Cover	
Sapling/Shrub Stratum	(Plot size: 15')			
1. <i>Rubus occidentalis</i>		5	Yes	UPL
2.				
3.				
4.				
5.				
		5	=Total Cover	
Herb Stratum	(Plot size: 5')			
1. <i>Juncus tenuis</i>		20	Yes	FAC
2. <i>Bromus inermis</i>		15	Yes	FACU
3. <i>Carex lurida</i>		15	Yes	OBL
4. <i>Impatiens pallida</i>		10	No	FACW
5. <i>Scirpus atrovirens</i>		10	No	OBL
6. <i>Agrostis gigantea</i>		10	No	FACW
7. <i>Poa palustris</i>		5	No	FACW
8. <i>Rumex crispus</i>		3	No	FAC
9. <i>Rumex verticillatus</i>		2	No	OBL
10.				
		90	=Total Cover	
Woody Vine Stratum	(Plot size: 30')			
1.				
2.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 27	x 1 = 27
FACW species 25	x 2 = 50
FAC species 23	x 3 = 69
FACU species 15	x 4 = 60
UPL species 5	x 5 = 25
Column Totals: 95 (A)	231 (B)
Prevalence Index = B/A = 2.43	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation

Present? Yes X No

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

Hydrophytic vegetation indicator present as prevalence index < 3.0

SOIL

Sampling Point: bl-20200605-

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 ¹	Loc ²	Texture	Remarks
0-1	10YR 4/2	100					Loamy/Clayey	silty clay loam
1-17	2.5Y 4/1	90	10YR 4/6	10	C	M	Loamy/Clayey	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> ? Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> Very Shallow Dark Surface (F22)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if observed):								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:								
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)								
Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations, not in a closed depression subject to ponding.								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one is required; check all that apply)</u>						<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Surface Soil Cracks (B6)		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Aquatic Fauna (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)			<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Gauge or Well Data (D9)					
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Other (Explain in Remarks)					
Field Observations:								
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>				
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="11"/>				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>				
(includes capillary fringe)						Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								
Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland abuts intermittent Stream 052 that flows northeast to Jonathan Creek that flows east to Muskingum River, a TNW.								

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-07	Rater: BL, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

4	4
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

21	17
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

31	10
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input checked="" type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-07	Rater: BL, SM

31 subtotal first page

31 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

38 7

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
0	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
x	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
X	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
1	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

38 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 055	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 055	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 055	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 055	
Date: June 5, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 055	
Date: June 5, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeH-200611-06a
 Investigator(s): AEH, SKM Section, Township, Range: S18 T17N R15W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave

Slope (%): 5 Lat: 39.87882 Long: -82.22844 Datum: NAD83

Soil Map Unit Name: GdC - Gilpin silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeH-20200622-06a is point in to PEM Wetland 056a, a PEM/PFO wetland complex. Wetland extends to west outside study area, drains to east to intermittent Stream 053.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum	(Plot size: <u>5'</u>)				
1. <u>Carex lurida</u>		40	Yes	OBL	
2. <u>Scirpus atrovirens</u>		15	Yes	OBL	
3. <u>Agrostis gigantea</u>		15	Yes	FACW	
4. <u>Carex vulpinoidea</u>		5	No	FACW	
5. <u>Impatiens capensis</u>		5	No	FACW	
6.					
7.					
8.					
9.					
10.					
		80	=Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
		=Total Cover			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>55</u>	x 1 = <u>55</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>105</u> (B)
Prevalence Index = B/A = <u>1.31</u>	

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

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

Hydrophytic vegetation indicators present as rapid test, dominant species are OBL and FACW

Sampling Point: aeh-200611-C

HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="0"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Multiple primary and secondary hydrology indicators present. Primary source of hydrology is precipitation and concentration of surface runoff in geomorphic position. Wetland drains to east to intermittent Stream 053 that drains east to Jonathan Creek that drains east to Muskingum River, a TNW.			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-06b
 Investigator(s): AEH, SKM Section, Township, Range: S18 T17N R15W
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave
 Slope (%): 5 Lat: 39.87888 Long: -82.22885 Datum: NAD83
 Soil Map Unit Name: GdC - Gilpin silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeh-20200622-06b is point in to PFO Wetland 056b, a PEM/PFO wetland complex. Wetland extends to west outside study area, drains to east to intermittent Stream 053.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Acer rubrum</u>	20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																								
2. <u>Ulmus americana</u>	15	Yes	FACW																																									
3. <u>Salix nigra</u>	5	No	OBL																																									
4. <u> </u>																																												
5. <u> </u>																																												
		40	=Total Cover																																									
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																												
1. <u>Salix nigra</u>	5	Yes	OBL	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td>65</td> <td>x 1 =</td> <td>65</td> <td></td> </tr> <tr> <td>FACW species</td> <td>60</td> <td>x 2 =</td> <td>120</td> <td></td> </tr> <tr> <td>FAC species</td> <td>20</td> <td>x 3 =</td> <td>60</td> <td></td> </tr> <tr> <td>FACU species</td> <td>5</td> <td>x 4 =</td> <td>20</td> <td></td> </tr> <tr> <td>UPL species</td> <td>0</td> <td>x 5 =</td> <td>0</td> <td></td> </tr> <tr> <td>Column Totals:</td> <td>150</td> <td>(A)</td> <td>265</td> <td>(B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td colspan="3"><u>1.77</u></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:			OBL species	65	x 1 =	65		FACW species	60	x 2 =	120		FAC species	20	x 3 =	60		FACU species	5	x 4 =	20		UPL species	0	x 5 =	0		Column Totals:	150	(A)	265	(B)	Prevalence Index = B/A =		<u>1.77</u>		
Total % Cover of:		Multiply by:																																										
OBL species	65	x 1 =	65																																									
FACW species	60	x 2 =	120																																									
FAC species	20	x 3 =	60																																									
FACU species	5	x 4 =	20																																									
UPL species	0	x 5 =	0																																									
Column Totals:	150	(A)	265	(B)																																								
Prevalence Index = B/A =		<u>1.77</u>																																										
2. <u> </u>																																												
3. <u> </u>																																												
4. <u> </u>																																												
5. <u> </u>																																												
		5	=Total Cover																																									
Herb Stratum (Plot size: <u>5'</u>)																																												
1. <u>Leersia oryzoides</u>	30	Yes	OBL	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2. <u>Carex frankii</u>	20	Yes	OBL																																									
3. <u>Agrostis gigantea</u>	15	Yes	FACW																																									
4. <u>Impatiens capensis</u>	15	Yes	FACW																																									
5. <u>Carex vulpinoidea</u>	15	Yes	FACW																																									
6. <u>Solidago canadensis</u>	5	No	FACU																																									
7. <u>Scirpus atrovirens</u>	5	No	OBL																																									
8. <u> </u>																																												
9. <u> </u>																																												
10. <u> </u>																																												
		105	=Total Cover																																									
Woody Vine Stratum (Plot size: <u>30'</u>)																																												
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
2. <u> </u>																																												
			=Total Cover																																									

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

Hydrophytic vegetation indicators present as dominance test > 50%, dominant species are OBL, FACW and FAC

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 6/1	85	10YR 6/6	15	C	PL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> ? Coast Prairie Redox (A16) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks) ³ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value matrix

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> 0 </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 6 </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> 0 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary source of hydrology is precipitation and concentration of surface runoff in geomorphic position. Wetland drains to east to intermittent Stream 053 that drains east to Jonathan Creek that drains east to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-06
 Investigator(s): AEH, SKM Section, Township, Range: S18 T17N R15W
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex
 Slope (%): 5 Lat: 39.87879 Long: -82.22838 Datum: NAD83
 Soil Map Unit Name: GdC - Gilpin silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sample point Upland 059 (upl-aeh-20200611-06) point out to Wetland 056, about 5 feet east of boundary. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>72</u></td> <td>x 4 = <u>288</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>117</u> (A)</td> <td><u>378</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.23</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>72</u>	x 4 = <u>288</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>117</u> (A)	<u>378</u> (B)	Prevalence Index = B/A = <u>3.23</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>45</u>	x 2 = <u>90</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>72</u>	x 4 = <u>288</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>117</u> (A)	<u>378</u> (B)																				
Prevalence Index = B/A = <u>3.23</u>																					
1. <u>Rosa multiflora</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		<u>10</u> =Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Solidago canadensis</u>		<u>45</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Dichanthelium clandestinum</u>		<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Carex scoparia</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Juncus dudleyi</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Phleum pratense</u>		<u>10</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Taraxacum officinale</u>		<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u>Fraxinus pennsylvanica</u>		<u>5</u>	<u>No</u>	<u>FACW</u>																	
8. <u>Allium cernuum</u>		<u>2</u>	<u>No</u>	<u>FACU</u>																	
9. <u> </u>																					
10. <u> </u>																					
		<u>107</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present as dominance test is not > 50%, dominant species are FACW and FACU, and prevalence index < 3.0.																					

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No X

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present.

Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) | |

Surface Water Present? Yes _____ No x Depth (inches): 0
 Water Table Present? Yes _____ No x Depth (inches): _____
 Saturation Present? Yes _____ No x Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-07ab	Rater: AH, SM

2	2
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input checked="" type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

8	6
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

21	13
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input checked="" type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> dike	<input checked="" type="checkbox"/> filling/grading
<input checked="" type="checkbox"/> tile	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other - list

30	9
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input checked="" type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input checked="" type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input checked="" type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 11, 2020
Wetland: w-aeH-20200611-07ab	Rater: AH, SM

30 subtotal first page

30 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

37 7

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
0	Emergent
<input type="checkbox"/>	Shrub
2	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
x	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
1	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

37 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 056a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 056a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 056a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 056a	
Date: June 4, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 056a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Soil Pit	


Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 056b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing North	

Wetland 056b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 056b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing South	

Wetland 056b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 056b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-07a
 Investigator(s): AEH, SKM Section, Township, Range: S7 T17N R15W

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 39.88309 Long: -82.23441 Datum: NAD83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sample point w-aeh-20200611-07a is point in to PEM component of Wetland 057a, a PEM/PFO wetland complex. Wetland located in drainage swale on hillside, drains to southwest out of study area, no defined hydrologic connection present, potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>					Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>195</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.86</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>195</u> (B)	Prevalence Index = B/A = <u>1.86</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>20</u>	x 1 = <u>20</u>																				
FACW species <u>80</u>	x 2 = <u>160</u>																				
FAC species <u>5</u>	x 3 = <u>15</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>105</u> (A)	<u>195</u> (B)																				
Prevalence Index = B/A = <u>1.86</u>																					
=Total Cover																					
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>15'</u>)																				
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
=Total Cover																					
<u>Herb Stratum</u>	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex vulpinoidea</u>		35	Yes	FACW																	
2. <u>Carex scoparia</u>		20	Yes	FACW																	
3. <u>Carex lurida</u>		10	No	OBL																	
4. <u>Impatiens capensis</u>		10	No	FACW																	
5. <u>Vitis riparia</u>		10	No	FACW																	
6. <u>Poa pratensis</u>		5	No	FAC																	
7. <u>Eupatorium perfoliatum</u>		5	No	OBL																	
8. <u>Scirpus atrovirens</u>		5	No	OBL																	
9. <u>Dichanthelium clandestinum</u>		5	No	FACW																	
10. <u> </u>																					
105 =Total Cover																					
<u>Woody Vine Stratum</u>	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
=Total Cover																					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicators present as rapid test, dominant species are OBL and FACW																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 5/1	95	10YR 6/6	5	C	pL	Loamy/Clayey	Prominent redox concentrations
6-18	10YR 5/1	70	10YR 6/6	30	C	pl	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> ? Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input checked="" type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value matrix with prominent redox concentrations in pore linings in depression subject to ponding.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Sample point w-aeh-20200611-07b is point in to PFO component of Wetland 057b, a PEM/PFO wetland complex. Wetland located in drainage swale on hillside, drains to southwest out of study area, no defined hydrologic connection present, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-07b
 Investigator(s): AEH, SKM Section, Township, Range: S7 T17N R15W

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 39.8830 Long: -82.23453 Datum: NAD83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeh-20200611-07b is point in to PFO component of Wetland 057b, a PEM/PFO wetland complex. Wetland located in drainage swale on hillside, drains to southwest out of study area, no defined hydrologic connection present, potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Acer rubrum</u>	40	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																																								
2. <u>Ulmus americana</u>	20	Yes	FACW																																									
3. <u> </u>																																												
4. <u> </u>																																												
5. <u> </u>																																												
	60	=Total Cover																																										
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																												
1. <u>Acer rubrum</u>	45	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">5</td> <td>x 1 =</td> <td style="text-align: center;">5</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">43</td> <td>x 2 =</td> <td style="text-align: center;">86</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">98</td> <td>x 3 =</td> <td style="text-align: center;">294</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">5</td> <td>x 4 =</td> <td style="text-align: center;">20</td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td>x 5 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">151</td> <td></td> <td style="text-align: center;">405</td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A =</td> <td style="text-align: center;">2.68</td> <td></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:			OBL species	5	x 1 =	5		FACW species	43	x 2 =	86		FAC species	98	x 3 =	294		FACU species	5	x 4 =	20		UPL species	0	x 5 =	0		Column Totals:	151		405	(B)	Prevalence Index = B/A =			2.68	
Total % Cover of:		Multiply by:																																										
OBL species	5	x 1 =	5																																									
FACW species	43	x 2 =	86																																									
FAC species	98	x 3 =	294																																									
FACU species	5	x 4 =	20																																									
UPL species	0	x 5 =	0																																									
Column Totals:	151		405	(B)																																								
Prevalence Index = B/A =			2.68																																									
2. <u>Lindera benzoin</u>	5	No	FACW																																									
3. <u> </u>																																												
4. <u> </u>																																												
5. <u> </u>																																												
	50	=Total Cover																																										
Herb Stratum (Plot size: <u>5'</u>)																																												
1. <u>Lindera benzoin</u>	10	Yes	FACW	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2. <u>Acer rubrum</u>	10	Yes	FAC																																									
3. <u>Carex lurida</u>	5	Yes	OBL																																									
4. <u>Parthenocissus quinquefolia</u>	5	Yes	FACU																																									
5. <u>Impatiens capensis</u>	3	No	FACW																																									
6. <u>Toxicodendron radicans</u>	3	No	FAC																																									
7. <u>Persicaria pensylvanica</u>	3	No	FACW																																									
8. <u>Fraxinus pennsylvanica</u>	2	No	FACW																																									
9. <u> </u>																																												
10. <u> </u>																																												
	41	=Total Cover																																										
Woody Vine Stratum (Plot size: <u>30'</u>)																																												
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
2. <u> </u>																																												
		=Total Cover																																										

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

Hydrophytic vegetation indicators present as dominance test > 50%, dominant species are OBL, FACW, FAC and FACU.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	95	10YR 6/8	5	C	PL	Loamy/Clayey	Prominent redox concentrations
4-18	10YR 4/1	95	10YR 6/8	5	C	PL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> ? Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value matrix and low chroma/low value matrix layers with prominent redox concentrations in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text" value="0"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Wetland drains to southwest outside of study area, no defined drainage feature present downslope, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-07
 Investigator(s): AEH, SKM Section, Township, Range: S7 T17N R15W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.88316 Long: -82.23457 Datum: NAD83

Soil Map Unit Name: GwD - Guernsey-Westmoreland silt loams, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sample point Upland 060 (upl-aeh-20200611-07) is point out to Wetland 057, about 5 feet north of boundary at equal elevation. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>185</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.64</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>70</u> (A)	<u>185</u> (B)	Prevalence Index = B/A = <u>2.64</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>15</u>	x 1 = <u>15</u>																				
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Column Totals: <u>70</u> (A)	<u>185</u> (B)																				
Prevalence Index = B/A = <u>2.64</u>																					
1. <u>Rosa multiflora</u>	<u>10</u>	Yes	FACU																		
2. <u>Juglans nigra</u>	<u>5</u>	Yes	FACU																		
3. <u>Platanus occidentalis</u>	<u>5</u>	Yes	FACW																		
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Dichanthelium clandestinum</u>	<u>15</u>	Yes	FACW																		
2. <u>Carex lurida</u>	<u>15</u>	Yes	OBL																		
3. <u>Parthenocissus quinquefolia</u>	<u>10</u>	Yes	FACU																		
4. <u>Verbesina alternifolia</u>	<u>5</u>	No	FACW																		
5. <u>Rosa multiflora</u>	<u>5</u>	No	FACU																		
6.																					
7.																					
8.																					
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as prevalence text < 3.0, dominant species are OBL, FACW and FACU																					

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u> X </u>
---	--

Remarks:
<p>This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)</p> <p>No hydric soil indicators present as low chroma/low value matrix does not have minimum 5% redox concentrations in pore linings.</p>

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:				Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text" value="0"/>	
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	No hydrology indicators present,
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Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-07ab	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

12	12
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input checked="" type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

28	16
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input checked="" type="checkbox"/>	(select one or double check & average)
<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

39	11
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input checked="" type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 11, 2020
Wetland: w-aeH-20200611-07ab	Rater: AH, SM

39 subtotal first page

39 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

48 9

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
<input type="checkbox"/>	Shrub
0	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
x	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
1	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

48 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 057a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 057a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 057a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 057a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 057a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Soil Pit	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 057b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing North	

Wetland 057b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 057b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing South	

Wetland 057b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 057b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-08
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Concave

Slope (%): 5 Lat: 39.88519 Long: -82.23737 Datum: NAD83

Soil Map Unit Name: GwC - Guernsey-Westmoreland silt loams, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sample point w-aeh-2020-611-08 point in to PEM Wetland 058. Wetland fully delineated within swale on hillside, no downstream hydrological connectivity, potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
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1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Carex crinita</u>	<u>45</u>	<u>Yes</u>	<u>OBL</u>																	
2.	<u>Phalaris arundinacea</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>																	
3.	<u>Dichanthelium clandestinum</u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
4.	<u>Carex vulpinoidea</u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
5.	<u>Carex frankii</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
6.	<u>Impatiens capensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
7.	<u>Onoclea sensibilis</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
8.																					
9.																					
10.																					
		<u>128</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.																					
2.																					
		=Total Cover																			
Hydrophytic Vegetation Indicators: <u>x</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																					
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicators present as rapid test, dominant species are OBL and FACW.																					

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as low chroma/high value matrix.

Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Surface Water Present? Yes _____ No x Depth (inches): 0
 Water Table Present? Yes _____ No x Depth (inches): _____
 Saturation Present? Yes _____ No x Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Multiple secondary hydrology indicators present. Primary source of hydrology is precipitation and concentration of surface runoff in geomorphic position. Wetland with no observable downstream connectivity, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-08
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 39.88526 Long: -82.23748 Datum: NAD83

Soil Map Unit Name: WnE - Westmoreland loam, 20 to 40 percent slopes, very bouldery NWI classification: _____

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? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: Sample point Upland 061 (upl-aeh-20200611-08) is point out to Wetland 058, about 10' west of boundary at lower elevation. Not a wetland point as no wetland criteria are met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	<u>5</u>	<u>=Total Cover</u>	_____																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>37</u></td> <td>x 2 = <u>74</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>97</u> (A)</td> <td><u>299</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.08</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>37</u>	x 2 = <u>74</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>97</u> (A)	<u>299</u> (B)	Prevalence Index = B/A = <u>3.08</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>37</u>	x 2 = <u>74</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>45</u>	x 4 = <u>180</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>97</u> (A)	<u>299</u> (B)																			
Prevalence Index = B/A = <u>3.08</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Vitis labrusca</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Asclepias syriaca</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Dichanthelium clandestinum</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Schedonorus arundinaceus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Poa pratensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
6. <u>Verbesina alternifolia</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
7. <u>Carex vulpinoidea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
8. <u>Impatiens capensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
9. <u>Onoclea sensibilis</u>	<u>2</u>	<u>No</u>	<u>FACW</u>																	
10. _____	_____	_____	_____																	
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
_____ =Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present as dominance test is not > 50%, dominant species are FACW, FAC and FACU																				

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No X

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present.

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Surface Water Present? Yes _____ No x Depth (inches): 0
 Water Table Present? Yes _____ No x Depth (inches): _____
 Saturation Present? Yes _____ No x Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-08	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

9	9
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input checked="" type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

25	16
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

34	9
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input checked="" type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 11, 2020
Wetland: w-aeH-20200611-08	Rater: AH, SM

34	subtotal first page
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34	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

35	1
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
x	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)
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Provisional Wetland Category:

modified 2


Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 058	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 058	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 058	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 058	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 058	
Date: June 11, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeH-200611-09a
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): floodplains Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 39.88613 Long: -82.2387 Datum: NAD83

Soil Map Unit Name: No - Nolin silt loam, 0 to 3 percent slopes, occasionally 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? 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeH-20200611-09a is point in for PSS Wetland 059a, part of a larger PSS/PFO complex. Wetland between edge of 100-year floodplain of Stream 056 (Jonathan Creek) and railroad grade. Wetland extends to southwest into woodlot.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																								
1. <u> </u>																																													
2. <u> </u>																																													
3. <u> </u>																																													
4. <u> </u>																																													
5. <u> </u>																																													
=Total Cover																																													
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																													
1. <u>Fraxinus pennsylvanica</u>		<u>15</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>85</u></td> <td>x 1 =</td> <td><u>85</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>50</u></td> <td>x 2 =</td> <td><u>100</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>135</u></td> <td>(A)</td> <td><u>185</u></td> <td>(B)</td> </tr> <tr> <td colspan="5">Prevalence Index = B/A = <u>1.37</u></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:			OBL species	<u>85</u>	x 1 =	<u>85</u>		FACW species	<u>50</u>	x 2 =	<u>100</u>		FAC species	<u>0</u>	x 3 =	<u>0</u>		FACU species	<u>0</u>	x 4 =	<u>0</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals:	<u>135</u>	(A)	<u>185</u>	(B)	Prevalence Index = B/A = <u>1.37</u>				
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Prevalence Index = B/A = <u>1.37</u>																																													
2. <u>Salix nigra</u>		<u>15</u>	<u>Yes</u>	<u>OBL</u>																																									
3. <u>Platanus occidentalis</u>		<u>5</u>	<u>No</u>	<u>FACW</u>																																									
4. <u> </u>																																													
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Herb Stratum (Plot size: <u>5'</u>)																																													
1. <u>Carex crinita</u>		<u>60</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2. <u>Carex vulpinoidea</u>		<u>15</u>	<u>No</u>	<u>FACW</u>																																									
3. <u>Impatiens capensis</u>		<u>15</u>	<u>No</u>	<u>FACW</u>																																									
4. <u>Acorus americanus</u>		<u>10</u>	<u>No</u>	<u>OBL</u>																																									
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Woody Vine Stratum (Plot size: <u>30'</u>)																																													
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
2. <u> </u>																																													
=Total Cover																																													
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL and FACW.																																													

SOIL

Sampling Point: aeh-200611-C

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="6"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are concentration of precipitation and surface runoff in geomorphic position and overbank flow from perennial stream Jonathan Creek. Wetland continues to southwest along railroad grade to Jonathan Creek, which flows east to Moxahala Creek that flows north to Muskingum River, a TNW.			

WETLAND DETERMINATION DATA FORM – Midwest Region

Wetland 059b

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-09b
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): floodplains Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 39.88603 Long: -82.23879 Datum: NAD83

Soil Map Unit Name: No - Nolin silt loam, 0 to 3 percent slopes, occasionally 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? Are "Normal Circumstances" present? Yes x No

Are Vegetation , Soil x, 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sample point w-aeh-20200611-09b is point in for PFO Wetland 059b, part of a larger PSS/PFO complex. Wetland between edge of 100-year floodplain of Stream 056 (Jonathan Creek) and railroad grade. Wetland extends to southwest into woodlot.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u>Platanus occidentalis</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Acer rubrum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Ulmus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Acer negundo</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
5. <u> </u>	<u>80</u>	<u>=Total Cover</u>																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>210</u> (A)</td> <td><u>430</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>210</u> (A)	<u>430</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
Total % Cover of:	Multiply by:																			
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Column Totals: <u>210</u> (A)	<u>430</u> (B)																			
Prevalence Index = B/A = <u>2.05</u>																				
2. <u>Asimina triloba</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Ulmus americana</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
4. <u> </u>																				
5. <u> </u>	<u>30</u>	<u>=Total Cover</u>																		
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Carex crinita</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Solidago gigantea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Potamogeton natans</u>	<u>15</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Phalaris arundinacea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Lysimachia nummularia</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
6. <u>Sanicula canadensis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
7. <u> </u>																				
8. <u> </u>																				
9. <u> </u>																				
10. <u> </u>	<u>100</u>	<u>=Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u> </u>																				
		<u>=Total Cover</u>																		

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

Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are OBL, FACW and FAC

Sampling Point: aeh-200611-(

HYDROLOGY					
Wetland Hydrology Indicators:					
<u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)				
Field Observations:			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):			<input type="text" value="0"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):			<input type="text" value="8"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):			<input type="text" value="5"/>
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					
Multiple primary and secondary hydrology indicators present. Wetland continues to southwest along railroad grade to Jonathan Creek, which flows east to Moxahala Creek that flows north to Muskingum River, a TNW.					

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-09
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): convex

Slope (%): 2 Lat: 39.88605 Long: -82.3898 Datum: NAD83

Soil Map Unit Name: No - Nolin silt loam, 0 to 3 percent slopes, occasionally 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? 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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Sample point Upland 062 (upl-aeh-20200611-09) is point out to Wetland 059, approximately 30' west of wetland boundary on far side of railroad grade on right descending bank of Jonathan Creek in 100-year floodplain. Not a wetland point as hydric soil criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Acer rubrum</u>	35	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																																								
2. <u>Acer negundo</u>	10	Yes	FAC																																									
3. <u> </u>																																												
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Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																												
1. <u>Acer rubrum</u>	10	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>30</u></td> <td>x 2 =</td> <td><u>60</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>70</u></td> <td>x 3 =</td> <td><u>210</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>30</u></td> <td>x 4 =</td> <td><u>120</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>130</u> (A)</td> <td></td> <td><u>390</u> (B)</td> <td></td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>3.00</u></td> <td></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:			OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>30</u>	x 2 =	<u>60</u>		FAC species	<u>70</u>	x 3 =	<u>210</u>		FACU species	<u>30</u>	x 4 =	<u>120</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals:	<u>130</u> (A)		<u>390</u> (B)		Prevalence Index = B/A = <u>3.00</u>				
Total % Cover of:		Multiply by:																																										
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Prevalence Index = B/A = <u>3.00</u>																																												
2. <u>Platanus occidentalis</u>	5	Yes	FACW																																									
3. <u> </u>																																												
4. <u> </u>																																												
5. <u> </u>																																												
		15 = Total Cover																																										
Herb Stratum (Plot size: <u>5'</u>)																																												
1. <u>Sanicula canadensis</u>	20	Yes	FACU	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2. <u>Urtica dioica</u>	15	Yes	FACW																																									
3. <u>Toxicodendron radicans</u>	15	Yes	FAC																																									
4. <u>Persicaria pensylvanica</u>	10	No	FACW																																									
5. <u>Parthenocissus quinquefolia</u>	10	No	FACU																																									
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Woody Vine Stratum (Plot size: <u>30'</u>)																																												
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
2. <u> </u>																																												
		= Total Cover																																										

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

Hydrophytic vegetation indicator present and dominance test > 50%, dominant species are FACW, FAC and FACU

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u> fill/gravel </u> Depth (inches): <u> 10 </u>	Hydric Soil Present? Yes <u> </u> No <u> X </u>
--	---

Remarks:
<p>This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)</p> <p>No hydric soil indicators present, soil profile comprised of mixed fill with low chroma/low value matrix with no redox concentrations in pore linings</p>

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:				Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Surface Water Present?	Yes <u> </u>	No <u> x </u>	Depth (inches): <u> 0 </u>	
Water Table Present?	Yes <u> </u>	No <u> x </u>	Depth (inches): <u> </u>	
Saturation Present?	Yes <u> </u>	No <u> x </u>	Depth (inches): <u> </u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Two secondary hydrology indicators present. Sample point located in 100-year floodplain of Jonathan Creek adjacent to right descending bank and railroad grade.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-09ab	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

12	12
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input checked="" type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

25	13
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input checked="" type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input checked="" type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

34	9
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input checked="" type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild **Date:** June 11, 2020
Wetland: w-aeh-20200611-09ab **Rater:** AH, SM

34 subtotal first page

34 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

- ☐ Bog (10 pts)
- ☐ Fen (10 pts)
- ☐ Old Growth Forest (10 pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10 pts)
- ☐ Relict Wet Prairies (10 pts)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/waterfowl habitat or usage (10 pts)
- ☐ Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

42 8

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

- ☐ Aquatic bed
- ☐ 2 Emergent
- ☐ 0 Shrub
- ☐ 0 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other (list)

6b. Horizontal (plan view) interspersions

Select only one

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☒ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

- ☐ Extensive >75 % cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☒ x Nearly Absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

- ☐ 2 Vegetated hummocks/tussocks
- ☐ 2 Coarse woody debris >15 cm (6")
- ☐ 1 Standing dead > 25 cm (10") dbh
- ☐ 0 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

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

Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 059a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 059a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 059a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing South	


Wetland 059	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 059a	
Date: June 11, 2020	
Description: PEM wetland Category 2 Soil Pit	

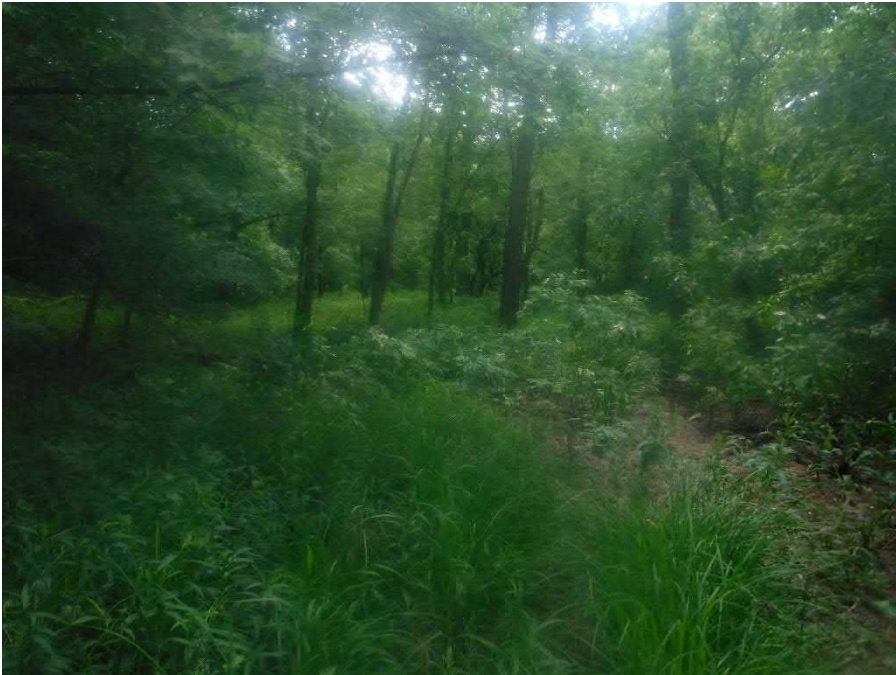
Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 059b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing North	


Wetland 059b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 059b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing South	

Wetland 059b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 059b	
Date: June 11, 2020	
Description: PFO wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-bl-20200605-01
 Investigator(s): SM, BL Section, Township, Range: S 12 T 17N R 16W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 39.88732 Long: -82.24034 Datum: NAD 83

Soil Map Unit Name: Mc - Melvin silt loam, thin solum, frequently ponded, 0 to 3 percent slopes NWI classification: PSS1C

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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sampling point in for PFO Wetland 060. Wetland is located in 100-year floodplain of Jonathan Creek and surrounded by agricultural field, extends to northeast and southwest outside study area.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <u>Salix nigra</u>	30	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																
2. <u>Acer negundo</u>	20	Yes	FAC																																	
3. <u> </u>																																				
4. <u> </u>																																				
5. <u> </u>																																				
	50	=Total Cover																																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																				
1. <u>Acer negundo</u>	10	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">53</td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">53</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">78</td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">156</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">30</td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">90</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">161</td> <td></td> <td style="text-align: center;">299 (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A =</td> <td style="text-align: center;">1.86</td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:		OBL species	53	x 1 =	53	FACW species	78	x 2 =	156	FAC species	30	x 3 =	90	FACU species	0	x 4 =	0	UPL species	0	x 5 =	0	Column Totals:	161		299 (B)	Prevalence Index = B/A =			1.86
Total % Cover of:		Multiply by:																																		
OBL species	53	x 1 =	53																																	
FACW species	78	x 2 =	156																																	
FAC species	30	x 3 =	90																																	
FACU species	0	x 4 =	0																																	
UPL species	0	x 5 =	0																																	
Column Totals:	161		299 (B)																																	
Prevalence Index = B/A =			1.86																																	
2. <u>Cephalanthus occidentalis</u>	3	No	OBL																																	
3. <u>Fraxinus pennsylvanica</u>	3	No	FACW																																	
4. <u> </u>																																				
5. <u> </u>																																				
	16	=Total Cover																																		
Herb Stratum (Plot size: <u>5'</u>)																																				
1. <u>Urtica dioica</u>	30	Yes	FACW	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																
2. <u>Phalaris arundinacea</u>	20	Yes	FACW																																	
3. <u>Lysimachia nummularia</u>	15	No	FACW																																	
4. <u>Carex crinita</u>	15	No	OBL																																	
5. <u>Onoclea sensibilis</u>	5	No	FACW																																	
6. <u>Persicaria lapathifolia</u>	5	No	FACW																																	
7. <u>Persicaria sagittata</u>	5	No	OBL																																	
8. <u> </u>																																				
9. <u> </u>																																				
10. <u> </u>																																				
	95	=Total Cover																																		
Woody Vine Stratum (Plot size: <u>30'</u>)																																				
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																
2. <u> </u>																																				
		=Total Cover																																		

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

Hydrophytic vegetation indicator present as dominance test > 50%, dominant species are OBL, FACW and FAC

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/2	98	10YR 4/6	2	C	PL	Loamy/Clayey	silty clay loam
5-18	10YR 5/2	80	10YR 5/6	20	C	PL/M	Loamy/Clayey	silty clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/low value and low chroma/high value matrix layers with redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are overbank flow from perennial stream Jonathan Creek and concentration of precipitation and surface runoff in geomorphic position. Wetland is adjacent/abuts perennial stream Jonathan Creek that flows east to Moxahala Creek that flows east to Muskingum River, a TNW.

Project/Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project City/County: Perry County Sampling Date: 06/05/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20200605-01
 Investigator(s): SM, BL Section, Township, Range: S 12 T 17N R 16W

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): flat

Slope (%): 0 Lat: 39.88734 Long: -82.2401 Datum: NAD 83

Soil Map Unit Name: Mc - Melvin silt loam, thin solum, frequently ponded, 0 to 3 percent slopes NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil x, 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Sampling point Upland 063, point out to Wetland 060, located approximately 10 feet east of wetland boundary on berm/spoils pile. Located in 100-year floodplain of Jonathan Creek adjacent to agricultural field. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Juglans nigra</u>	30	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.9%</u> (A/B)																																								
2. <u> </u>																																												
3. <u> </u>																																												
4. <u> </u>																																												
5. <u> </u>																																												
	30	=Total Cover																																										
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																																												
1. <u>Gleditsia triacanthos</u>	5	Yes	FACU	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">10</td> <td>x 1 =</td> <td style="text-align: center;">10</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">70</td> <td>x 2 =</td> <td style="text-align: center;">140</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0</td> <td>x 3 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">65</td> <td>x 4 =</td> <td style="text-align: center;">260</td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">2</td> <td>x 5 =</td> <td style="text-align: center;">10</td> <td></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">147</td> <td></td> <td style="text-align: center;">420</td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A =</td> <td style="text-align: center;">2.86</td> <td></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:			OBL species	10	x 1 =	10		FACW species	70	x 2 =	140		FAC species	0	x 3 =	0		FACU species	65	x 4 =	260		UPL species	2	x 5 =	10		Column Totals:	147		420	(B)	Prevalence Index = B/A =			2.86	
Total % Cover of:		Multiply by:																																										
OBL species	10	x 1 =	10																																									
FACW species	70	x 2 =	140																																									
FAC species	0	x 3 =	0																																									
FACU species	65	x 4 =	260																																									
UPL species	2	x 5 =	10																																									
Column Totals:	147		420	(B)																																								
Prevalence Index = B/A =			2.86																																									
2. <u>Rubus occidentalis</u>	2	Yes	UPL																																									
3. <u> </u>																																												
4. <u> </u>																																												
5. <u> </u>																																												
	7	=Total Cover																																										
Herb Stratum (Plot size: <u>5'</u>)																																												
1. <u>Galium aparine</u>	20	Yes	FACU	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
2. <u>Phalaris arundinacea</u>	20	Yes	FACW																																									
3. <u>Verbesina alternifolia</u>	15	Yes	FACW																																									
4. <u>Lysimachia nummularia</u>	15	Yes	FACW																																									
5. <u>Leersia virginica</u>	10	No	FACW																																									
6. <u>Persicaria hydropiper</u>	10	No	OBL																																									
7. <u>Solidago altissima</u>	10	No	FACU																																									
8. <u>Urtica dioica</u>	5	No	FACW																																									
9. <u>Poa palustris</u>	5	No	FACW																																									
10. <u> </u>																																												
	110	=Total Cover																																										
Woody Vine Stratum (Plot size: <u>30'</u>)																																												
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
2. <u> </u>																																												
		=Total Cover																																										
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as Prevalence index < 3.0, dominant species are FACW, FACU and UPL																																												

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	2.5Y 4/3	100					Loamy/Clayey	sandy to silty clay loam
5-14	2.5Y 4/4	100					Loamy/Clayey	sandy silt
14-20	10YR 4/3	100					Loamy/Clayey	sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present?

Yes _____ No _____

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/> _____	Depth (inches): <u>0</u>
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/> _____	Depth (inches): _____
Saturation Present?	Yes _____	No <input checked="" type="checkbox"/> _____	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes _____ No ☒ _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

One secondary hydrology indicator present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 5, 2020
Wetland: w-bl-20200605-01	Rater: BL, SM

2	2
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input checked="" type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

4	2
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

23	19
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input checked="" type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input checked="" type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input checked="" type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

39	16
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input checked="" type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input checked="" type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 5, 2020
Wetland: w-bl-20200605-01	Rater: BL, SM

39 subtotal first page

39 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

44 5

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
0	Emergent
0	Shrub
2	Forest
0	Mudflats
0	Open water
	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
<input checked="" type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input checked="" type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
1	Coarse woody debris >15 cm (6")
1	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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

44 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:


modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 060	
Date: June 5, 2020	
Description: PFO wetland Category 2 Facing North	

Wetland 060	
Date: June 5, 2020	
Description: PFO wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 060	
Date: June 5, 2020	
Description: PFO wetland Category 2 Facing South	

Wetland 060	
Date: June 5, 2020	
Description: PFO wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 060	
Date: June 5, 2020	
Description: PFO wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Crooksville-North Newark 138 kV Transmission Line</u>	City/County: <u>Perry County</u>	Sampling Date: <u>06/11/2020</u>
Applicant/Owner: <u>AEP</u>	State: <u>OH</u>	Sampling Point: <u>w-aeh-200611-05</u>
Investigator(s): <u>AEH, SKM</u>	Section, Township, Range: <u>S12 T17N R16W</u>	
Landform (hillside, terrace, etc.): <u>lowland</u>	Local relief (concave, convex, none): <u>none</u>	
Slope (%): <u>0</u> Lat: <u>39.891044</u>	Long: <u>-82.24504</u>	Datum: <u>NAD 83</u>
Soil Map Unit Name: <u>GnBn - Glenford silt loam, 1 to 8 percent slopes</u>		NWI classification: <u>PEM1A</u>

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks: Sample point w-aeh-20200622-05 point in to PEM Wetland 061. Wetland located in upper reach of low drainage swale area NWI-mapped PEM1A area, though wetland extent is limited. Wetland fully delineated, drains to south through grassy drainage swale, potentially isolated.					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: 15')			
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Herb Stratum	(Plot size: 5')			
1. <i>Carex frankii</i>		30	Yes	OBL
2. <i>Eleocharis palustris</i>		30	Yes	OBL
3. <i>Carex lurida</i>		15	No	OBL
4. <i>Poa pratensis</i>		10	No	FAC
5. <i>Agrostis gigantea</i>		10	No	FACW
6. <i>Juncus effusus</i>		5	No	OBL
7. <i>Scirpus atrovirens</i>		5	No	OBL
8.				
9.				
10.				
		105	=Total Cover	
Woody Vine Stratum	(Plot size: 30')			
1.				
2.				
		=Total Cover		

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

Hydrophytic vegetation indicator present as rapid test, dominant species are OBL.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 85	x 1 = 85
FACW species 10	x 2 = 20
FAC species 10	x 3 = 30
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 105 (A)	135 (B)
Prevalence Index = B/A = 1.29	

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation

Present?	Yes	No
X		

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

? Coast Prairie Redox (A16)
 ___ Iron-Manganese Masses (F12)
 ___ Red Parent Material (F21)
 ___ Very Shallow Dark Surface (F22)
 ___ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No

Hydric soil indicator present as low chroma/high value matrix with prominent redox concentrations in pore linings.

Secondary Indicators (minimum of two required)

<input type="checkbox"/>	Surface Soil Cracks (B6)
<input checked="" type="checkbox"/>	Drainage Patterns (B10)
<input type="checkbox"/>	Dry-Season Water Table (C2)
<input type="checkbox"/>	Crayfish Burrows (C8)
<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/>	Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/>	Geomorphic Position (D2)
<input checked="" type="checkbox"/>	FAC-Neutral Test (D5)

Surface Water Present?	Yes <u> </u>	No <u> x </u>	Depth (inches): <u> 0 </u>
Water Table Present?	Yes <u> x </u>	No <u> </u>	Depth (inches): <u> 4 </u>
Saturation Present?	Yes <u> x </u>	No <u> </u>	Depth (inches): <u> 0 </u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Multiple primary and secondary hydrology indicators present. Primary source of hydrology is precipitation and concentration of surface runoff in geomorphic position. Wetland drains to south through vegetated drainage swale, no defined drainage feature present, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Crooksville-North Newark 138 kV Transmission Line</u>	City/County: <u>Perry County</u>	Sampling Date: <u>06/11/2020</u>
Applicant/Owner: <u>AEP</u>	State: <u>OH</u>	Sampling Point: <u>upl-aeh-200611-05</u>
Investigator(s): <u>AEH, SKM</u>	Section, Township, Range: <u>S12 T17N R16W</u>	
Landform (hillside, terrace, etc.): <u>Lowland</u>	Local relief (concave, convex, none): <u>none</u>	
Slope (%): <u>1</u> Lat: <u>39.89087</u>	Long: <u>-82.24517</u>	Datum: <u>NAD 83</u>
Soil Map Unit Name: <u>GnBn - Glenford silt loam, 1 to 8 percent slopes</u>		NWI classification: <u>PEM1A</u>

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?	Yes <u> </u>	No <u> X </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u> X </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u> X </u>			
Remarks: Sample point Upland 064 (upl-aeh-20200611-05) is point out to Wetland 061 within NWI-mapped wetland. Not a wetland point as hydrophytic vegetation and hydrology criteria not met.					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: 15')			
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Herb Stratum	(Plot size: 5')			
1.	<i>Schedonorus arundinaceus</i>	45	Yes	FACU
2.	<i>Poa pratensis</i>	25	Yes	FAC
3.	<i>Juncus tenuis</i>	15	No	FAC
4.	<i>Trifolium repens</i>	15	No	FACU
5.	<i>Carex lurida</i>	5	No	OBL
6.	<i>Scirpus atrovirens</i>	5	No	OBL
7.				
8.				
9.				
10.				
		110	=Total Cover	
Woody Vine Stratum	(Plot size: 30')			
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species 0	x 2 = 0
FAC species 40	x 3 = 120
FACU species 60	x 4 = 240
UPL species 0	x 5 = 0
Column Totals: 110 (A)	370 (B)
Prevalence Index = B/A = 3.36	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation

Present? Yes No X

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

No hydrophytic vegetation indicators present, dominance test is not > 50%, dominant species are FAC and FACU, and prevalence index > 3.0.

[illegible]

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text" value="0"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No hydrology indicators present.			

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-05	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	15
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

21	5
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input checked="" type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input checked="" type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild **Date:** June 11, 2020**Wetland:** w-aeH-20200611-05 **Rater:** AH, SM

21 subtotal first page

21 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

24 3

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

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)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 061	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 061	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 061	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 061	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 061	
Date: June 11, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-04
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 39.89373 Long: -82.2491 Datum: NAD 83

Soil Map Unit Name: AfC - Alford silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeh-20200611-04 point in to PEM Wetland 062 located in depression in hay field. Wetland fully delineated, no downstream identified, potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																																								
1. <u> </u>																																													
2. <u> </u>																																													
3. <u> </u>																																													
4. <u> </u>																																													
5. <u> </u>																																													
		=Total Cover			Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td><u>70</u></td> <td>x 1 =</td> <td><u>70</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>25</u></td> <td>x 2 =</td> <td><u>50</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>5</u></td> <td>x 4 =</td> <td><u>20</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u></td> <td>(A)</td> <td><u>140</u></td> <td>(B)</td> </tr> <tr> <td colspan="5">Prevalence Index = B/A = <u>1.40</u></td> </tr> </table>	Total % Cover of:		Multiply by:			OBL species	<u>70</u>	x 1 =	<u>70</u>		FACW species	<u>25</u>	x 2 =	<u>50</u>		FAC species	<u>0</u>	x 3 =	<u>0</u>		FACU species	<u>5</u>	x 4 =	<u>20</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals:	<u>100</u>	(A)	<u>140</u>	(B)	Prevalence Index = B/A = <u>1.40</u>				
Total % Cover of:		Multiply by:																																											
OBL species	<u>70</u>	x 1 =	<u>70</u>																																										
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Column Totals:	<u>100</u>	(A)	<u>140</u>	(B)																																									
Prevalence Index = B/A = <u>1.40</u>																																													
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
1. <u> </u>																																													
2. <u> </u>																																													
3. <u> </u>																																													
4. <u> </u>																																													
5. <u> </u>																																													
		=Total Cover			Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
Herb Stratum	(Plot size: <u>5'</u>)																																												
1. <u>Carex frankii</u>		<u>35</u>	<u>Yes</u>	<u>OBL</u>																																									
2. <u>Juncus effusus</u>		<u>20</u>	<u>Yes</u>	<u>OBL</u>																																									
3. <u>Phalaris arundinacea</u>		<u>15</u>	<u>No</u>	<u>FACW</u>																																									
4. <u>Verbesina alternifolia</u>		<u>10</u>	<u>No</u>	<u>FACW</u>																																									
5. <u>Carex lurida</u>		<u>10</u>	<u>No</u>	<u>OBL</u>																																									
6. <u>Acorus americanus</u>		<u>5</u>	<u>No</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
7. <u>Parthenocissus quinquefolia</u>		<u>5</u>	<u>No</u>	<u>FACU</u>																																									
8. <u> </u>																																													
9. <u> </u>																																													
10. <u> </u>																																													
		100 =Total Cover																																											
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																								
1. <u> </u>																																													
2. <u> </u>																																													
		=Total Cover																																											
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicators present as rapid test, dominant species are OBL.																																													

SOIL

Sampling Point: -aeh-200611-

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	5B 4/1	85	10YR 6/6	15	C	pL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.
²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)

☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7)
☐ Loamy Mucky Mineral (F1)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ ? Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators 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:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as gleyed matrix.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value=""/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="10"/>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
One primary and multiple secondary hydrology indicators present. Saturation evident on aerial imagery 2013 (OGRIP-OSIP 2). No downstream drainage feature identified, potentially isolated.			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-04
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none

Slope (%): 5 Lat: 39.89375 Long: -82.24913 Datum: NAD 83

Soil Map Unit Name: AfC - Alford silt loam, 8 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes 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? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Sample point Upland 065 (upl-aeh-20200611-04) is point out to Wetland 062, about 5 feet west of wetland boundary in hay field. Not a wetland point as hydrophytic vegetation and hydrology indicators not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>395</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.59</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>395</u> (B)	Prevalence Index = B/A = <u>3.59</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>15</u>	x 2 = <u>30</u>																				
FAC species <u>15</u>	x 3 = <u>45</u>																				
FACU species <u>80</u>	x 4 = <u>320</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>110</u> (A)	<u>395</u> (B)																				
Prevalence Index = B/A = <u>3.59</u>																					
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Trifolium repens</u>		<u>45</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>		<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Juncus tenuis</u>		<u>15</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Phalaris arundinacea</u>		<u>15</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Schedonorus arundinaceus</u>		<u>15</u>	<u>No</u>	<u>FACU</u>																	
6. <u> </u>																					
7. <u> </u>																					
8. <u> </u>																					
9. <u> </u>																					
10. <u> </u>																					
		<u>110</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			

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

No hydrophytic vegetation indicators present, dominance test is not > 50%, dominant species are FACU, and prevalence index is > 3.0

SOIL

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text" value="0"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No hydrology indicators present.			

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-03	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

4	4
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

14	10
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

23	9
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild **Date:** June 11, 2020**Wetland:** w-aeH-20200611-03 **Rater:** AH, SM

23 subtotal first page

23 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

24 1

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
x	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

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)

Provisional Wetland Category:

Category 1


Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 062	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 062	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 062	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 062	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 062	
Date: June 11, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-03
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave

Slope (%): 0 Lat: 39.89486 Long: -82.24967 Datum: NAD 83

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeh-20200622-03 point in to PEM Wetland 063, depression along border between two pasture/hay fields. Wetland fully delineated, no drainage features away from wetland present, potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
					=Total Cover
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
					=Total Cover
Herb Stratum	(Plot size: <u>5'</u>)				
1.	<u>Phalaris arundinacea</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Eleocharis palustris</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
3.	<u>Carex lurida</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
4.	<u>Juncus tenuis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5.	<u>Trifolium pratense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
6.					
7.					
8.					
9.					
10.					
					<u>95</u> =Total Cover
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
					=Total Cover

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>30</u>	x 1 = <u>30</u>
FACW species <u>45</u>	x 2 = <u>90</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>190</u> (B)
Prevalence Index = B/A = <u>2.00</u>	

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

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

Hydrophytic vegetation indicators present as rapid test, dominant species are OBL and FACW

[illegible]

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as gleyed matrix.

Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) | |

Surface Water Present?	Yes <u> </u>	No <u> x </u>	Depth (inches): <u> 0 </u>
Water Table Present?	Yes <u> x </u>	No <u> </u>	Depth (inches): <u> 10 </u>
Saturation Present?	Yes <u> x </u>	No <u> </u>	Depth (inches): <u> 4 </u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Multiple primary and secondary hydrology indicators present. Primary source of hydrology is precipitation and concentration of surface runoff in geomorphic position. No outlet drainage feature present, potentially isolated.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-03
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 39.89398 Long: -82.2497 Datum: NAD 83

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sample point Upland 066 (upl-aeh-20200611-03) is point out to Wetland 063, about 10' south of boundary at higher elevation in hay field. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.64</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>110</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>3.64</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>10</u>	x 2 = <u>20</u>																				
FAC species <u>35</u>	x 3 = <u>105</u>																				
FACU species <u>50</u>	x 4 = <u>200</u>																				
UPL species <u>15</u>	x 5 = <u>75</u>																				
Column Totals: <u>110</u> (A)	<u>400</u> (B)																				
Prevalence Index = B/A = <u>3.64</u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)																				
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Phleum pratense</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2.	<u>Ranunculus hispidus</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3.	<u>Leucanthemum vulgare</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>																	
4.	<u>Agrimonia parviflora</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
5.	<u>Taraxacum officinale</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
6.	<u>Trifolium pratense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
7.	<u>Poa pratensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
8.	<u>Juncus tenuis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
9.																					
10.																					
		<u>110</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present, dominance test is not > 50%, dominant species are FAC, FACU and UPL, and prevalence index > 3.0																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
---	--

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present as low chroma/low value matrix with no redox concentrations present.

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-03	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

11	10
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

15	4
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input checked="" type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Wetland 063

ORAM v. 5.0 Field Form Quantitative Rating

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild **Date:** June 11, 2020
Wetland: w-aeH-20200611-03 **Rater:** AH, SM

15 subtotal first page

15 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

13 -2

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
1	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
x	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

0	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)**

Provisional Wetland Category:


Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 063	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 063	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 063	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 063	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 063	
Date: June 11, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-02
 Investigator(s): AEH, SKM Section, Township, Range: S12 T17N R16W

Landform (hillside, terrace, etc.): lowland Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.89709 Long: -82.25299 Datum: NAD 83

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeh-20200611-02 is point in to PEM Wetland 064, small wetland in hay field. Wetland fully delineated, drains to south through grassy swale outside study area, potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum	(Plot size: <u>5'</u>)				
1.	<u>Carex scoparia</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Poa pratensis</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
3.	<u>Digitaria sanguinalis</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
4.	<u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
5.	<u>Apocynum cannabinum</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
6.					
7.					
8.					
9.					
10.					
		<u>62</u> =Total Cover			
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
		=Total Cover			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>17</u>	x 3 = <u>51</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>62</u> (A)	<u>166</u> (B)
Prevalence Index = B/A = <u>2.68</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation indicators present as dominance test > 50%, dominant species are FACW, FAC and FACU

SOIL

Sampling Point: aeh-200611-

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)		
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)			
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <input type="text" value="0"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Depth (inches): <input type="text" value="5"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Depth (inches): <input type="text" value="2"/>
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				
Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland drains to south through grassy drainage swale, no stream feature present, potentially isolated.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Crooksville-North Newark 138 kV Transmission Line</u>	City/County: <u>Perry County</u>	Sampling Date: <u>06/11/2020</u>
Applicant/Owner: <u>AEP</u>	State: <u>OH</u>	Sampling Point: <u>upl-aeh-200611-02</u>
Investigator(s): <u>AEH, SKM</u>	Section, Township, Range: <u>S2. T17N. R16W</u>	

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.897 Long: -82.253 Datum: NAD 83

Soil Map Unit Name: Cincinnati silt loam, 8 to 15 percent slopes (CkC2) 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 x , Soil x , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

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 <u> </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u> X </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u> X </u>			
Remarks: Sample point Upland 067 (upl-aeh-20200611-02) is point out to Wetland 064, about 10 feet north of wetland boundary in ag field (not normal circumstances, disturbed vegetation and soils). Not a wetland point as hydrophytic vegetation and hydrology criteria not met.					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: 15')			
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Herb Stratum	(Plot size: 5')			
1. <i>Glycine max</i>		25	Yes	UPL
2. <i>Digitaria sanguinalis</i>		15	Yes	FACU
3. <i>Juncus tenuis</i>		5	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		45 =Total Cover		
Woody Vine Stratum	(Plot size: 30')			
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 15	x 4 = 60
UPL species 25	x 5 = 125
Column Totals: 45 (A)	200 (B)
Prevalence Index = B/A = 4.44	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation

Present? Yes No

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

No hydrophytic vegetation indicators present as dominance test is not > 50%, dominant species are FACU and UPL, and prevalence index > 3.0.

Remnant and nearby undisturbed vegetation not dominated by hydrophytic vegetation.

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 5/1	95	10YR 6/8	5	C	PL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present?Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as low chroma/high value matrix

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>0</u>
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrophytic vegetation indicators present. No evidence of existing field tile throughout area.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-02	Rater: AH, SM

1	1
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input checked="" type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

2	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17	15
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input checked="" type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

23	6
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input checked="" type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input checked="" type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild **Date:** June 11, 2020**Wetland:** w-aeH-20200611-02 **Rater:** AH, SM

23 subtotal first page

23 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

- | | |
|--------------------------|--|
| <input type="checkbox"/> | Bog (10 pts) |
| <input type="checkbox"/> | Fen (10 pts) |
| <input type="checkbox"/> | Old Growth Forest (10 pts) |
| <input type="checkbox"/> | Mature forested wetland (5 pts) |
| <input type="checkbox"/> | Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts) |
| <input type="checkbox"/> | Lake Erie coastal/tributary wetland-restricted hydrology (5 pts) |
| <input type="checkbox"/> | Lake Plain Sand Prairies (Oak Openings) (10 pts) |
| <input type="checkbox"/> | Relict Wet Prairies (10 pts) |
| <input type="checkbox"/> | Known occurrence state/federal threatened or endangered species (10) |
| <input type="checkbox"/> | Significant migratory songbird/waterfowl habitat or usage (10 pts) |
| <input type="checkbox"/> | Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts) |

26 3

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

- | | |
|--------------------------|--------------|
| <input type="checkbox"/> | Aquatic bed |
| 1 | Emergent |
| <input type="checkbox"/> | Shrub |
| <input type="checkbox"/> | Forest |
| <input type="checkbox"/> | Mudflats |
| <input type="checkbox"/> | Open water |
| <input type="checkbox"/> | Other (list) |

6b. Horizontal (plan view) interspersions

Select only one

- | | |
|--------------------------|---------------------|
| <input type="checkbox"/> | High (5) |
| <input type="checkbox"/> | Moderately high (4) |
| <input type="checkbox"/> | Moderate (3) |
| <input type="checkbox"/> | Moderately low (2) |
| <input type="checkbox"/> | Low (1) |
| x | None (0) |

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

- | | |
|--------------------------|-----------------------------|
| <input type="checkbox"/> | Extensive >75 % cover (-5) |
| <input type="checkbox"/> | Moderate 25-75% cover (-3) |
| <input type="checkbox"/> | Sparse 5-25% cover (-1) |
| <input type="checkbox"/> | Nearly Absent <5% cover (0) |
| x | Absent (1) |

6d. Microtopography

Score all present using 0 to 3 scale

- | | |
|---|---------------------------------|
| 1 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15 cm (6") |
| 0 | Standing dead > 25 cm (10") dbh |
| 0 | Amphibian breeding pools |

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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)

Provisional Wetland Category:

Category 1

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 064	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 064	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 064	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 064	
Date: June 11, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 064	
Date: June 11, 2020	
Description: PEM wetland Category 1 Soil Pit	

Wetland 065

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeH-200610-10
 Investigator(s): AEH, SKM Section, Township, Range: S2. T17N. R16W

Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.900445 Long: -82.255358 Datum: NAD 83

Soil Map Unit Name: Westmoreland silt loam, 25 to 35 percent slopes (WmE) 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Point in to PEM Wetland 065 is located within the floodplain of intermittent Stream 062. Wetland extends to north outside study area.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum	(Plot size: <u>5'</u>)				
1.	<u>Onoclea sensibilis</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Carex lurida</u>	<u>20</u>	<u>No</u>	<u>OBL</u>	
3.	<u>Carex crinita</u>	<u>20</u>	<u>No</u>	<u>OBL</u>	
4.	<u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
5.	<u>Dichanthelium clandestinum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
6.	<u>Carex annectens</u>	<u>3</u>	<u>No</u>	<u>FACW</u>	
7.	<u>Impatiens capensis</u>	<u>2</u>	<u>No</u>	<u>FACW</u>	
8.					
9.					
10.					
		<u>125</u> =Total Cover			
Woody Vine Stratum	(Plot size: <u>30'</u>)				
1.					
2.					
		=Total Cover			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>45</u>	x 1 = <u>45</u>
FACW species <u>80</u>	x 2 = <u>160</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>125</u> (A)	<u>205</u> (B)
Prevalence Index = B/A = <u>1.64</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation indicator present as Rapid Test.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 6/1	90	10YR 6/6	10	C	PL	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.				² Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators:				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> ? Coast Prairie Redox (A16)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Iron-Manganese Masses (F12)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (F21)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Dark Surface (S7)		<input type="checkbox"/> Very Shallow Dark Surface (F22)				
<input type="checkbox"/> Stratified Layers (A5)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> 2 cm Muck (A10)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input checked="" type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		<input type="checkbox"/> Redox Depressions (F8)						
Restrictive Layer (if observed):				Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Type: _____								
Depth (inches): _____								
Remarks:								
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)								
Hydric soil indicator present as low chroma/high value depleted matrix.								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is required; check all that apply)				Secondary Indicators (minimum of two required)				
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Surface Soil Cracks (B6)				
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Drainage Patterns (B10)				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> True Aquatic Plants (B14)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Sediment Deposits (B2)		<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input checked="" type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Gauge or Well Data (D9)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Other (Explain in Remarks)						
Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
Water Table Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>2</u>					
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								
Multiple primary and secondary hydrology indicators present. the wetland abuts intermittent Stream 062, that drains south to an NHD-mapped stream that flows south to Jonathan Creek that flows east to Muskingum River, a TNW.								

Upland 068

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeH-200610-11
 Investigator(s): AEH, SKM Section, Township, Range: S2. T17N. R16W

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.900289 Long: -82.25545 Datum: NAD 83

Soil Map Unit Name: Westmoreland silt loam, 25 to 35 percent slopes (WmE) 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 068 is point out located southwest of Wetland 065 and west of intermittent Stream 062. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14.3%</u> (A/B)																
1. <u>Acer saccharum</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Fagus grandifolia</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Ulmus rubra</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Carya ovata</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u> </u>	<u>70</u>	<u>=Total Cover</u>	<u> </u>	Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>13</u></td> <td>x 3 = <u>39</u></td> </tr> <tr> <td>FACU species <u>115</u></td> <td>x 4 = <u>460</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>143</u> (A)</td> <td><u>529</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.70</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>13</u>	x 3 = <u>39</u>	FACU species <u>115</u>	x 4 = <u>460</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>143</u> (A)	<u>529</u> (B)	Prevalence Index = B/A = <u>3.70</u>	
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5. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Galium aparine</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Parthenocissus quinquefolia</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Persicaria pensylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Solidago canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
5. <u>Ageratina altissima</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
6. <u>Acer saccharum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u>Agrimonia parviflora</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
8. <u>Asimina triloba</u>	<u>3</u>	<u>No</u>	<u>FAC</u>																	
9. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
10. <u> </u>																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
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168. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
169. <u> </u>																				
170. <u> </u>																				
171. <u> </u>																				
172. <u> </u>																				
173. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
174. <u> </u>																				
175. <u> </u>																				
176. <u> </u>																				
177. <u> </u>																				
178. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
179. <u> </u>																				
180. <u> </u>																				
181. <u> </u>																				
182. <u> </u>																				
183. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
184. <u> </u>																				
185. <u> </u>																				
186. <u> </u>																				
187. <u> </u>																				
188. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
189. <u> </u>																				
190. <u> </u>																				
191. <u> </u>																				
192. <u> </u>																				
193. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
194. <u> </u>																				
195. <u> </u>																				
196. <u> </u>																				

HYDROLOGY			
Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
No hydrology indicators present.			

Wetland 065

ORAM v. 5.0 Field Form Quantitative Rating

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 10, 2020
Wetland: w-aeh-20200610-10	Rater: AH, SM

1	1
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)

Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input checked="" type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

13	12
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)

2a. Calculate average buffer width (select one, do not double check)

<input checked="" type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

31	18
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)

3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input checked="" type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input checked="" type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

(select one or double check & average)	
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input checked="" type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

(select one or double check & average)	
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input checked="" type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

43	12
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input checked="" type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 10, 2020
Wetland: w-aeH-20200610-10	Rater: AH, SM

43 subtotal first page

43 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

- ☐ Bog (10 pts)
- ☐ Fen (10 pts)
- ☐ Old Growth Forest (10 pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10 pts)
- ☐ Relict Wet Prairies (10 pts)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/waterfowl habitat or usage (10 pts)
- ☐ Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

48 5

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

- ☐ Aquatic bed
- 2 ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other (list)

6b. Horizontal (plan view) interspersions

Select only one

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- x ☐ None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

- ☐ Extensive >75 % cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly Absent <5% cover (0)
- x ☐ Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

- 1 ☐ Vegetated hummocks/tussocks
- 1 ☐ Coarse woody debris >15 cm (6")
- 0 ☐ Standing dead > 25 cm (10") dbh
- 0 ☐ Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

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

48 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 065	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 065	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 065	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 065	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 065	
Date: June 10, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200611-01
 Investigator(s): AEH, SKM Section, Township, Range: S2 T17N R16W

Landform (hillside, terrace, etc.): depressional Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.92432 Long: -82.27344 Datum: NAD 83

Soil Map Unit Name: HaD2 - Homewood-Westmoreland silt loams, 15 to 25 percent slopes, eroded 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample point w-aeh-20200611-01 is point in to PEM Wetland 066, located in depression area between hills and on both banks of intermittent Stream 063. Wetland extends to northeast and southwest outside study area.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
1. <u> </u>																													
2. <u> </u>																													
3. <u> </u>																													
4. <u> </u>																													
5. <u> </u>																													
		=Total Cover																											
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																													
1. <u>Salix nigra</u>		5	Yes	OBL	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 20%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species <u>100</u></td> <td>x 1 =</td> <td><u>100</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 =</td> <td><u>70</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td></td> <td><u>170</u> (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = <u>1.26</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:		OBL species <u>100</u>	x 1 =	<u>100</u>	FACW species <u>35</u>	x 2 =	<u>70</u>	FAC species <u>0</u>	x 3 =	<u>0</u>	FACU species <u>0</u>	x 4 =	<u>0</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>135</u> (A)		<u>170</u> (B)	Prevalence Index = B/A = <u>1.26</u>		
Total % Cover of:	Multiply by:																												
OBL species <u>100</u>	x 1 =	<u>100</u>																											
FACW species <u>35</u>	x 2 =	<u>70</u>																											
FAC species <u>0</u>	x 3 =	<u>0</u>																											
FACU species <u>0</u>	x 4 =	<u>0</u>																											
UPL species <u>0</u>	x 5 =	<u>0</u>																											
Column Totals: <u>135</u> (A)		<u>170</u> (B)																											
Prevalence Index = B/A = <u>1.26</u>																													
2. <u> </u>																													
3. <u> </u>																													
4. <u> </u>																													
5. <u> </u>																													
		5 =Total Cover																											
Herb Stratum (Plot size: <u>5'</u>)																													
1. <u>Acorus americanus</u>		80	Yes	OBL	Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Impatiens capensis</u>		15	No	FACW																									
3. <u>Dichanthelium clandestinum</u>		15	No	FACW																									
4. <u>Carex lurida</u>		10	No	OBL																									
5. <u>Juncus effusus</u>		5	No	OBL																									
6. <u>Phalaris arundinacea</u>		5	No	FACW																									
7. <u> </u>																													
8. <u> </u>																													
9. <u> </u>																													
10. <u> </u>																													
		130 =Total Cover																											
Woody Vine Stratum (Plot size: <u>30'</u>)																													
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																								
2. <u> </u>																													
		=Total Cover																											
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL and FACW.																													

Sampling Point: -aeh-200611-

HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text" value="16"/>		
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text" value="12"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Multiple primary and secondary hydrology indicators present. Wetland abuts intermittent Stream 063 that drains south to NHD-mapped stream that flows south to Jonathan Creek that flows east to Muskingum River, a TNW.			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 06/11/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200611-01
 Investigator(s): AEH, SKM Section, Township, Range: S2. T17N. R16W

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.906 Long: -82.260 Datum: NAD 83

Soil Map Unit Name: Homewood-Westmoreland silt loams, 15 to 25 percent (HaD2) 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sample point Upland 069 (upl-aeh-20200611-01) point out to Wetland 066, about 5 feet north of wetland boundary at higher elevation. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>280</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.29</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>280</u> (B)	Prevalence Index = B/A = <u>3.29</u>	
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1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Phalaris arundinacea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Phleum pratense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Rosa multiflora</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4.	<u>Vitis vulpina</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
5.	<u>Taraxacum officinale</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
6.	<u>Solidago canadensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7.	<u>Dichanthelium clandestinum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
8.																					
9.																					
10.																					
		85 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present as dominance test is not > 50%, dominant species are FACW and FACU, and prevalence index > 3.0																					

Sampling Point: I-aeh-200611

HYDROLOGY			
Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
No hydrology indicators present			

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 11, 2020
Wetland: w-aeh-20200611-01	Rater: AH, SM

2	2
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input checked="" type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

5	3
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input checked="" type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

27	22
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input checked="" type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input checked="" type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.(select one or double check & average)

<input checked="" type="checkbox"/>	None or none apparent (12)
<input type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

40	13
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input checked="" type="checkbox"/>	None or none apparent (4)
<input type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input checked="" type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input checked="" type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 11, 2020
Wetland: w-aeH-20200611-01	Rater: AH, SM

40	subtotal first page
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40	0
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Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

46	6
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Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
0	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
x	Low (1)
<input type="checkbox"/>	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
1	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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


46	GRAND TOTAL (max 100 pts)
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Provisional Wetland Category:


Category 2


Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 066	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 066	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 066	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 066	
Date: June 11, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 066	
Date: June 11, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 09/21/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-20200921-04
 Investigator(s): AEH, WRL Section, Township, Range: S2 T17N R16W

Landform (hillside, terrace, etc.): saddle Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 39.9132 Long: -82.26485 Datum: NAD83

Soil Map Unit Name: HaD2 - Homewood-Westmoreland silt loams, 15 to 25 percent slopes, eroded 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sample point w-aeh-20200921-04 point in to PEM Wetland 067, in wide saddle between hills. Two streams flow into wetland, drains to intermittent Stream 066 to east. Wetland open to east and west outside ROW	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u> </u>																					
2. <u> </u>																					
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
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Column Totals: <u>96</u> (A)	<u>118</u> (B)																				
Prevalence Index = B/A = <u>1.23</u>																					
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																					
1. <u>Salix interior</u>		<u>2</u>	No	FACW																	
2. <u>Rubus occidentalis</u>		<u>2</u>	No	UPL																	
3. <u> </u>																					
4. <u> </u>																					
5. <u> </u>																					
		=Total Cover																			
Herb Stratum (Plot size: <u>5'</u> radius)					Hydrophytic Vegetation Indicators: <u>x</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Persicaria sagittata</u>		<u>30</u>	Yes	OBL																	
2. <u>Leersia oryzoides</u>		<u>30</u>	Yes	OBL																	
3. <u>Typha latifolia</u>		<u>10</u>	No	OBL																	
4. <u>Scirpus cyperinus</u>		<u>5</u>	No	OBL																	
5. <u>Symphyotrichum novae-angliae</u>		<u>5</u>	No	FACW																	
6. <u>Impatiens capensis</u>		<u>5</u>	No	FACW																	
7. <u>Eupatorium perfoliatum</u>		<u>3</u>	No	OBL																	
8. <u>Agrimonia parviflora</u>		<u>2</u>	No	FACW																	
9. <u>Mimulus ringens</u>		<u>2</u>	No	OBL																	
10. <u> </u>																					
		=Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>		<u>0</u>																			
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL																					

SOIL

Sampling Point: 1eh-20200921

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/1	90	10YR 4/4	10	c	pl	Loamy/Clayey	Distinct redox concentrations
2-9	2.5Y 4/1	80	2.5Y 4/3	20	c	pl	Loamy/Clayey	Prominent redox concentrations
9-18	10YR 3/1	90	7.5YR 3/4	10	c	pl	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> ? Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input checked="" type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value matrix with prominent redox features in pore linings, in depression subject to ponding

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Wetland drains by intermittent Stream 067 to north to Valley Run that drains to west to Jonathan Creek that drains east to Muskingum River, a TNW. Primary sources of hydrology are ephemeral Stream 066 and intermittent Stream 067

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 09/21/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-20200921-04
 Investigator(s): AEH, WRL Section, Township, Range: S2 T17N R16W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 39.90717 Long: -82.2636 Datum: NAD83

Soil Map Unit Name: CkC2 - Cincinnati silt loam, 8 to 15 percent slopes, eroded 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Sample point w-aeh-20200921-04 point out to Wetland 067, about 15' northwest of wetland boundary. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28.6%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15' radius</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>55</u></td> <td>x 4 = <u>220</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>320</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.56</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>90</u> (A)	<u>320</u> (B)	Prevalence Index = B/A = <u>3.56</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>15</u>	x 2 = <u>30</u>																				
FAC species <u>15</u>	x 3 = <u>45</u>																				
FACU species <u>55</u>	x 4 = <u>220</u>																				
UPL species <u>5</u>	x 5 = <u>25</u>																				
Column Totals: <u>90</u> (A)	<u>320</u> (B)																				
Prevalence Index = B/A = <u>3.56</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Setaria pumila</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																		
2. <u>Onoclea sensibilis</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																		
3. <u>Achillea millefolium</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																		
4. <u>Solidago altissima</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
5. <u>Schizachyrium scoparium</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
6. <u>Ambrosia artemisiifolia</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
7. <u>Cirsium arvense</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
8. <u>Tridens flavus</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																		
9.																					
10.																					
		90 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.		<u>0</u>																			
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present as dominance test is not > 50%, dominant species are FACW, FAC and FACU, and prevalence index > 3.0																					

SOIL

Sampling Point: aeh-2020092

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 4/3	100					Loamy/Clayey	
3-16	2.5Y 5/4	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
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Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

Wetland 067

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

9/21/2020

2 **2**

max 6 pts

subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-aeh-20200921-04

0.80

acres
extends outside survey area**10** **12**

max 14 pts.

subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16.0 **28.0**

max 30 pts.

subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
☐ Other groundwater (3)
☒ Precipitation (1)
☒ Seasonal/Intermittent surface water (3)
☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select one.

- ☐ >0.7 (27.6in) (3)
☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
☒ <0.4m (<15.7in) (1)

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

- ☐ None or none apparent (12)
☒ Recovered (7)
☐ Recovering (3)
☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
☒ Between stream/lake and other human use (1)
☒ Part of wetland/upland (e.g. forest), complex (1)
☒ Part of riparian or upland corridor (1)

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

- ☐ Semi- to permanently inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

13 **41**

max 20 pts.

subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
☒ Recovered (3)
☐ Recovering (2)
☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
☐ Very good (6)
☐ Good (5)
☒ Moderately good (4)
☐ Fair (3)
☐ Poor to fair (2)
☐ Poor (1)

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

- ☐ None or none apparent (9)
☒ Recovered (6)
☐ Recovering (3)
☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> woody debris removal | <input checked="" type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

41

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 067

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

9/21/2020

Field Id:

w-aeh-20200921-04

41

subtotal this page

0

41

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
☐ Fen (10)
☐ Old growth forest (10)
☐ Mature forested wetland (5)
☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
☐ Lake Plain Sand Prairies (Oak Openings) (10)
☐ Relict Wet Prairies (10)
☐ Known occurrence state/federal threatened or endangered species (10)
☐ Significant migratory songbird/water fowl habitat or usage (10)
☐ Category 1 Wetland. See Question 5 Qualitative Rating (-10)

8

49

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
☒ Emergent
☐ Shrub
☐ Forest
☐ Mudflats
☐ Open water
☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
☐ Moderately high(4)
☐ Moderate (3)
☐ Moderately low (2)
☒ Low (1)
☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
☐ Moderate 25-75% cover (-3)
☐ Sparse 5-25% cover (-1)
☐ Nearly absent <5% cover (0)
☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☒ 1 Vegetated hummocks/tussocks
☒ 2 Coarse woody debris >15cm (6in)
☒ 1 Standing dead >25cm (10in) dbh
☐ 0 Amphibian breeding pools

Vegetation Community Cover Scale

- 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area
1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 2

49


GRAND TOTAL(max 100 pts)

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 067	
Date: September 21, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 067	
Date: September 21, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 067	
Date: September 21, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 067	
Date: September 21, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 067	
Date: September 21, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 09/21/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-20200921-05
 Investigator(s): AEH, WRL Section, Township, Range: S14 T18N R16W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 2 Lat: 39.92184 Long: -82.26246 Datum: NAD83

Soil Map Unit Name: MnD2 - Mentor silt loam, 12 to 18 percent slopes, eroded 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Sample point w-aeh-20200921-05 point in to PEM Wetland 068. Wetland within swale in pasture, fully delineated. Drains to ephemeral Stream 069 to east.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u> radius)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>74</u></td> <td>x 1 = <u>74</u></td> </tr> <tr> <td>FACW species <u>41</u></td> <td>x 2 = <u>82</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>117</u> (A)</td> <td><u>164</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.40</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>74</u>	x 1 = <u>74</u>	FACW species <u>41</u>	x 2 = <u>82</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>117</u> (A)	<u>164</u> (B)	Prevalence Index = B/A = <u>1.40</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>74</u>	x 1 = <u>74</u>																				
FACW species <u>41</u>	x 2 = <u>82</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>2</u>	x 4 = <u>8</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>117</u> (A)	<u>164</u> (B)																				
Prevalence Index = B/A = <u>1.40</u>																					
1. <u>Rosa multiflora</u>	<u>2</u>	No	FACU																		
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: <u>x</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Persicaria sagittata</u>	<u>30</u>	Yes	OBL																		
2. <u>Leersia oryzoides</u>	<u>30</u>	Yes	OBL																		
3. <u>Impatiens capensis</u>	<u>15</u>	No	FACW																		
4. <u>Cyperus strigosus</u>	<u>10</u>	No	FACW																		
5. <u>Pilea pumila</u>	<u>10</u>	No	FACW																		
6. <u>Carex lurida</u>	<u>5</u>	No	OBL																		
7. <u>Persicaria hydropiper</u>	<u>5</u>	No	OBL																		
8. <u>Symphyotrichum novae-angliae</u>	<u>3</u>	No	FACW																		
9. <u>Echinochloa crus-galli</u>	<u>3</u>	No	FACW																		
10. <u>Eutrochium maculatum</u>	<u>2</u>	No	OBL																		
		=Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.	<u>0</u>																				
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test, dominant species are OBL																					

VEGETATION Continued – Use scientific names of plants.

Sampling Point: v-aeH-20200921-0

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata: Tree – 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 and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
		=Total Cover		
Sapling/Shrub Stratum				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
		2 =Total Cover		
Herb Stratum				
11. <i>Scirpus atrovirens</i>	2	No	OBL	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
		115 =Total Cover		
Woody Vine Stratum				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
		=Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: ieh-20200921

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/1	90	10YR 4/4	10	c	pl	Loamy/Clayey	Distinct redox concentrations
2-9	2.5Y 4/1	85	2.5Y 4/3	15	c	pl	Loamy/Clayey	Prominent redox concentrations
9-18	10Y 3/1	90	2.5Y 5/3	10	c	pl	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
³ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicators present as low chroma/high value matrix with distinct and prominent redox features in pore linings.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>17</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Wetland drains by ephemeral Stream 067 east to intermittent stream 068 north to Valley Run that drains to west to Jonathan Creek that drains east to Muskingum River, a TNW. Primary source of hydrology is precipitation and concentration of surface runoff.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Perry County Sampling Date: 09/21/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-20200921-05
 Investigator(s): AEH, WRL Section, Township, Range: S14 T18N R16W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 20 Lat: 39.92018 Long: -82.27014 Datum: NAD83

Soil Map Unit Name: MnD2 - Mentor silt loam, 12 to 18 percent slopes, eroded 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Sample point w-aeh-20200921-05 point out to Wetland 068, about 15' north of wetland boundary. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <u><i>Ailanthus altissima</i></u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1%</u> (A/B)																																
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
<u>20</u> = Total Cover																																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																																				
1. <u><i>Ailanthus altissima</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>40</u></td> <td>x 2 =</td> <td><u>80</u></td> </tr> <tr> <td>FAC species</td> <td><u>20</u></td> <td>x 3 =</td> <td><u>60</u></td> </tr> <tr> <td>FACU species</td> <td><u>47</u></td> <td>x 4 =</td> <td><u>188</u></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>107</u> (A)</td> <td></td> <td><u>328</u> (B)</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">Prevalence Index = B/A = <u>3.07</u></td> </tr> </tbody> </table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>40</u>	x 2 =	<u>80</u>	FAC species	<u>20</u>	x 3 =	<u>60</u>	FACU species	<u>47</u>	x 4 =	<u>188</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>107</u> (A)		<u>328</u> (B)			Prevalence Index = B/A = <u>3.07</u>	
Total % Cover of:		Multiply by:																																		
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>40</u>	x 2 =	<u>80</u>																																	
FAC species	<u>20</u>	x 3 =	<u>60</u>																																	
FACU species	<u>47</u>	x 4 =	<u>188</u>																																	
UPL species	<u>0</u>	x 5 =	<u>0</u>																																	
Column Totals:	<u>107</u> (A)		<u>328</u> (B)																																	
		Prevalence Index = B/A = <u>3.07</u>																																		
2. <u><i>Acer rubrum</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																																	
3. <u><i>Rosa multiflora</i></u>	<u>2</u>	<u>No</u>	<u>FACU</u>																																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
<u>12</u> = Total Cover																																				
Herb Stratum (Plot size: <u>5' radius</u>)																																				
1. <u><i>Pilea pumila</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																
2. <u><i>Persicaria maculosa</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																																	
3. <u><i>Ambrosia artemisiifolia</i></u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																																	
4. <u><i>Setaria pumila</i></u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																																	
5. <u><i>Symphytotrichum pilosum</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
<u>75</u> = Total Cover																																				
Woody Vine Stratum (Plot size: <u>30'</u>)																																				
1. <u> </u>	<u>0</u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																	
<u> </u> = Total Cover																																				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test is > 50%, dominant species are FACW, FAC and FACU																																				

SOIL

Sampling Point: aeh-2020092

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 4/3	100					Loamy/Clayey	
3-15	2.5Y 5/4	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches): <u>0</u> Water Table Present? Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

Wetland 068

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

9/21/2020

Field Id:

w-aeh-20200921-05

0	0
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max 6 pts

subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☒ <0.1 acres (0.04ha) (0 pts)

0.04

 acres

4	4
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max 14 pts.

subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

7.0	11.0
-----	------

max 30 pts.

subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
☐ Other groundwater (3)
☒ Precipitation (1)
☐ Seasonal/Intermittent surface water (3)
☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select one.

- ☐ >0.7 (27.6in) (3)
☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
☒ <0.4m (<15.7in) (1)

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

- ☐ None or none apparent (12)
☐ Recovered (7)
☒ Recovering (3)
☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
☒ Between stream/lake and other human use (1)
☐ Part of wetland/upland (e.g. forest), complex (1)
☐ Part of riparian or upland corridor (1)

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

- ☐ Semi- to permanently inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

8	19
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max 20 pts.

subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
☐ Recovered (3)
☒ Recovering (2)
☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
☐ Very good (6)
☐ Good (5)
☐ Moderately good (4)
☒ Fair (3)
☐ Poor to fair (2)
☐ Poor (1)

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

- ☐ None or none apparent (9)
☐ Recovered (6)
☒ Recovering (3)
☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input checked="" type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> woody debris removal | <input checked="" type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

19

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 068

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

9/21/2020

Field Id:

w-aeH-20200921-05

19

subtotal this page

0

19

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 5 Qualitative Rating (-10)

2

21

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

- 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area
- 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

21 GRAND TOTAL(max 100 pts)

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 068	
Date: September 21, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 068	
Date: September 21, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 068	
Date: September 21, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 068	
Date: September 21, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 068	
Date: September 21, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200610-06
 Investigator(s): AEH, SKM Section, Township, Range: S15. T18N. R16W

Landform (hillside, terrace, etc.): depressional Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.92432 Long: -82.273448 Datum: NAD 83

Soil Map Unit Name: Melvin silt loam. 0 to 3 percent slopes, frequently flooded (Me) 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Point in to PEM Wetland 069, located in 100-year floodplain abutting perennial Stream 071 (Valley Run). Wetland extends to southwest outside study area to NWI-mapped PFO1A wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>92</u></td> <td>x 2 = <u>184</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>102</u> (A)</td> <td><u>214</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.10</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>92</u>	x 2 = <u>184</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>102</u> (A)	<u>214</u> (B)	Prevalence Index = B/A = <u>2.10</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>92</u>	x 2 = <u>184</u>																				
FAC species <u>10</u>	x 3 = <u>30</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>102</u> (A)	<u>214</u> (B)																				
Prevalence Index = B/A = <u>2.10</u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)																				
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Valerianella umbilicata</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2.	<u>Dichanthelium clandestinum</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3.	<u>Carex annectens</u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
4.	<u>Poa pratensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
5.	<u>Phalaris arundinacea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
6.	<u>Agrostis gigantea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
7.	<u>Onoclea sensibilis</u>	<u>2</u>	<u>No</u>	<u>FACW</u>																	
8.																					
9.																					
10.																					
		102 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/2	100					Loamy/Clayey	
8-18	10YR 4/2	97	10YR 6/6	3	C	PL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary sources of hydrology are overbank flow from perennial stream and concentration of precipitation. wetland abuts perennial stream Valley Run that flows south to Jonathan Creek that flows east to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeH-200610-06
 Investigator(s): AEH, SKM Section, Township, Range: S15. T18N. R16W

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.923898 Long: -82.273387 Datum: NAD 83

Soil Map Unit Name: Melvin silt loam. 0 to 3 percent slopes, frequently flooded (Me) NWI classification: PFO1A

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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 072 is point out located south of Wetland 069. Location is within mapped 100-year floodplain of Valley Run in NWI mapped wetland. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.9%</u> (A/B)																
1. <u>Acer negundo</u>	15	Yes	FAC																	
2. <u>Ulmus rubra</u>	10	Yes	FAC																	
3. <u>Prunus serotina</u>	10	Yes	FACU																	
4. <u>Juglans nigra</u>	5	No	FACU																	
5. <u>Celtis occidentalis</u>	5	No	FAC																	
	45	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Prunus serotina</u>	15	Yes	FACU	Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>55</u></td> <td>x 4 = <u>220</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>125</u> (A)</td> <td><u>420</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.36</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>125</u> (A)	<u>420</u> (B)	Prevalence Index = B/A = <u>3.36</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>10</u>	x 2 = <u>20</u>																			
FAC species <u>60</u>	x 3 = <u>180</u>																			
FACU species <u>55</u>	x 4 = <u>220</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>125</u> (A)	<u>420</u> (B)																			
Prevalence Index = B/A = <u>3.36</u>																				
2. <u>Juglans nigra</u>	10	Yes	FACU																	
3. <u> </u>																				
4. <u> </u>																				
5. <u> </u>																				
	25	=Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Lobelia spicata</u>	20	Yes	FAC	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Solidago canadensis</u>	15	Yes	FACU																	
3. <u>Verbesina alternifolia</u>	10	No	FACW																	
4. <u>Acer negundo</u>	10	No	FAC																	
5. <u> </u>																				
6. <u> </u>																				
7. <u> </u>																				
8. <u> </u>																				
9. <u> </u>																				
10. <u> </u>																				
	55	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
2. <u> </u>																				
		=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)
 No hydrophytic vegetation indicators present.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					Loamy/Clayey	
2-18	10YR 4/2	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
---	--

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Indicators for Problematic Hydric Soils³:
☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 No hydric soil indicators present, low chroma/low value matrix without required redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

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 <u>x</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

Wetland 069

Site: Crooksville- Newark Project Rater(s): Audrey Hanner Date: 6/10/2020

1 1

max 6 pts subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-aeH-20200610-06

_____ acres

6 7

max 14 pts. subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16.0 23.0

max 30 pts. subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select one.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

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

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☒ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

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

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

7.5 30.5

max 20 pts. subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☒ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

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

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input checked="" type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> woody debris removal | <input checked="" type="checkbox"/> farming |
| <input checked="" type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

30.5

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 069

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

30.5

subtotal this page

0 30.5

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
☐ Fen (10)
☐ Old growth forest (10)
☐ Mature forested wetland (5)
☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
☐ Lake Plain Sand Prairies (Oak Openings) (10)
☐ Relict Wet Prairies (10)
☐ Known occurrence state/federal threatened or endangered species (10)
☐ Significant migratory songbird/water fowl habitat or usage (10)
☐ Category 1 Wetland. See Question 5 Qualitative Rating (-10)

0 30.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.**6a. Wetland Vegetation Communities.**

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
☒ 1 Emergent
☐ Shrub
☐ Forest
☐ Mudflats
☐ Open water
☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
☐ Moderately high(4)
☐ Moderate (3)
☐ Moderately low (2)
☐ Low (1)
☒ x None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
☐ Moderate 25-75% cover (-3)
☒ x Sparse 5-25% cover (-1)
☐ Nearly absent <5% cover (0)
☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☒ 0 Vegetated hummocks/tussocks
☒ 0 Coarse woody debris >15cm (6in)
☒ 0 Standing dead >25cm (10in) dbh
☒ 0 Amphibian breeding pools

Field Id:

w-aeH-20200610-06

Vegetation Community Cover Scale

- ☒ 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area
☐ 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Modified Category 2**30.5 GRAND TOTAL(max 100 pts)**

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 069	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 069	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 069	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 069	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 069	
Date: June 10, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200610-07
 Investigator(s): AEH, SKM Section, Township, Range: S15. T18N. R16W

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none

Slope (%): 10 Lat: 39.926910 Long: -82.27592 Datum: NAD 83

Soil Map Unit Name: Chili loam, 6 to 12 percent slopes, eroded (ChC2) 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Point in to Wetland 070 is located at the bottom of a hillside and extends into the agricultural field to the south. The wetland extends to the west outside of the survey area towards an NWI-mapped wetland area. Potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
					=Total Cover
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
					=Total Cover
<u>Herb Stratum</u>	(Plot size: <u>5'</u>)				
1.	<u>Juncus effusus</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	
2.	<u>Juncus antheratus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Eupatorium perfoliatum</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
4.	<u>Scirpus atrovirens</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
5.	<u>Carex crinita</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
6.	<u>Agrostis gigantea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
7.	<u>Equisetum arvense</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
8.					
9.					
10.					
					<u>90</u> =Total Cover
<u>Woody Vine Stratum</u>	(Plot size: <u>30'</u>)				
1.					
2.					
					=Total Cover

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>55</u>	x 1 = <u>55</u>
FACW species <u>30</u>	x 2 = <u>60</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>130</u> (B)
Prevalence Index = B/A = <u>1.44</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation indicator present as Rapid Test

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	5B 5/1	90	10YR 6/6	10	C	PL	Loamy/Clayey	Prominent redox concentrations
8-18	5B 5/1	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> ? Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as gleyed matrix.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. The wetland drains by overland sheetflow to the west to a pond located outside of the survey area. Not located within a mapped 100-year floodplain, with no identifiable drainage features from the wetland, potentially isolated.

Upland 074

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200610-08
 Investigator(s): AEH, SKM Section, Township, Range: S15. T18N. R16W
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none
 Slope (%): 15 Lat: 39.9271477 Long: -82.275731 Datum: NAD 83
 Soil Map Unit Name: Chili loam, 6 to 12 percent slopes, eroded (ChC2) 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upland 074 is point out located northeast of Wetland 070 on a hillside north of an agricultural field. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
=Total Cover				
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)			
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
=Total Cover				
Herb Stratum	(Plot size: <u>5'</u>)			
1. <u>Solidago canadensis</u>		35	Yes	FACU
2. <u>Cirsium arvense</u>		30	Yes	FACU
3. <u>Parthenocissus quinquefolia</u>		30	Yes	FACU
4. <u>Verbesina alternifolia</u>		10	No	FACW
5. <u>Rumex crispus</u>		5	No	FAC
6. <u>Juncus effusus</u>		2	No	OBL
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
112 =Total Cover				
Woody Vine Stratum	(Plot size: <u>30'</u>)			
1. <u> </u>				
2. <u> </u>				
=Total Cover				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>2</u>	x 1 = <u>2</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>95</u>	x 4 = <u>380</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>112</u> (A)	<u>417</u> (B)
Prevalence Index = B/A = <u>3.72</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
No hydrophytic vegetation indicators present.

[illegible]

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No hydrology indicators present.			

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 10, 2020
Wetland: w-aeh-20200610-07	Rater: AH, SM

1	1
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input checked="" type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

5	4
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input checked="" type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input checked="" type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17	12
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input checked="" type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input type="checkbox"/>	Regularly inundated/saturated (3)
<input checked="" type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input checked="" type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

25	8
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input checked="" type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input type="checkbox"/>	Fair (3)
<input checked="" type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input checked="" type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input checked="" type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild **Date:** June 10, 2020
Wetland: w-aeH-20200610-07 **Rater:** AH, SM

25 subtotal first page

25 0

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

30 5

Subtotal Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
<input type="checkbox"/>	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
x	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale


0	Absent
1	Present very small amounts or if more common of marginal quality
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


30 **GRAND TOTAL (max 100 pts)**

Provisional Wetland Category:

Modified Category 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 070	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 070	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 070	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 070	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 070	
Date: June 10, 2020	
Description: PEM wetland Category 2 Soil Pit	

Wetland 071

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeH-200610-08
 Investigator(s): AEH, SKM Section, Township, Range: S15. T18N. R16W

Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): None

Slope (%): 0 Lat: 39.92945 Long: -82.27772 Datum: NAD 83

Soil Map Unit Name: Chili loam, 12 to 18 percent slopes, eroded (ChD2) 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Point in to PSS Wetland 071 is located within a swale that extends outside of the survey corridor and is along intermittent Stream 072.	

VEGETATION – Use scientific names of plants.

<p>Tree Stratum (Plot size: <u>30'</u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Tree Stratum</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Acer saccharinum</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Salix nigra</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">OBL</td></tr> <tr><td>3. <u>Fraxinus pennsylvanica</u></td><td style="text-align: center;">3</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">13</td><td colspan="2">=Total Cover</td></tr> </tbody> </table> <p>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Sapling/Shrub Stratum</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Platanus occidentalis</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Salix nigra</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">OBL</td></tr> <tr><td>3. <u>Acer saccharinum</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>4. <u>Ulmus americana</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">60</td><td colspan="2">=Total Cover</td></tr> </tbody> </table> <p>Herb Stratum (Plot size: <u>5'</u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Herb Stratum</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Poa pratensis</u></td><td style="text-align: center;">35</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Impatiens capensis</u></td><td style="text-align: center;">25</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>Carex molesta</u></td><td style="text-align: center;">15</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u>Carex lurida</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">OBL</td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">80</td><td colspan="2">=Total Cover</td></tr> </tbody> </table> <p>Woody Vine Stratum (Plot size: <u>30'</u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Woody Vine Stratum</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"> </td><td colspan="2">=Total Cover</td></tr> </tbody> </table>	Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Acer saccharinum</u>	5	Yes	FACW	2. <u>Salix nigra</u>	5	Yes	OBL	3. <u>Fraxinus pennsylvanica</u>	3	Yes	FACW	4. <u> </u>				5. <u> </u>				13		=Total Cover		Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Platanus occidentalis</u>	20	Yes	FACW	2. <u>Salix nigra</u>	15	Yes	OBL	3. <u>Acer saccharinum</u>	15	Yes	FACW	4. <u>Ulmus americana</u>	10	No	FACW	5. <u> </u>				60		=Total Cover		Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Poa pratensis</u>	35	Yes	FAC	2. <u>Impatiens capensis</u>	25	Yes	FACW	3. <u>Carex molesta</u>	15	No	FAC	4. <u>Carex lurida</u>	5	No	OBL	5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>				9. <u> </u>				10. <u> </u>				80		=Total Cover		Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>				2. <u> </u>						=Total Cover		<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>8</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">25</td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">25</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">78</td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">156</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">50</td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">150</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">153</td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">331 (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td colspan="2" style="text-align: center;">2.16</td> </tr> </tbody> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><u> </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><u>X</u> 2 - Dominance Test is >50%</p> <p><u>X</u> 3 - Prevalence Index is ≤3.0¹</p> <p><u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u></p>	Total % Cover of:		Multiply by:		OBL species	25	x 1 =	25	FACW species	78	x 2 =	156	FAC species	50	x 3 =	150	FACU species	0	x 4 =	0	UPL species	0	x 5 =	0	Column Totals:	153	(A)	331 (B)	Prevalence Index = B/A =		2.16	
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Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																						
1. <u>Poa pratensis</u>	35	Yes	FAC																																																																																																																																																						
2. <u>Impatiens capensis</u>	25	Yes	FACW																																																																																																																																																						
3. <u>Carex molesta</u>	15	No	FAC																																																																																																																																																						
4. <u>Carex lurida</u>	5	No	OBL																																																																																																																																																						
5. <u> </u>																																																																																																																																																									
6. <u> </u>																																																																																																																																																									
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80		=Total Cover																																																																																																																																																							
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																						
1. <u> </u>																																																																																																																																																									
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Total % Cover of:		Multiply by:																																																																																																																																																							
OBL species	25	x 1 =	25																																																																																																																																																						
FACW species	78	x 2 =	156																																																																																																																																																						
FAC species	50	x 3 =	150																																																																																																																																																						
FACU species	0	x 4 =	0																																																																																																																																																						
UPL species	0	x 5 =	0																																																																																																																																																						
Column Totals:	153	(A)	331 (B)																																																																																																																																																						
Prevalence Index = B/A =		2.16																																																																																																																																																							
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%.																																																																																																																																																									

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as low chroma/high value depleted matrix.

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Surface Water Present?	Yes <u> </u>	No <u> x </u>	Depth (inches): <u> </u>
Water Table Present?	Yes <u> x </u>	No <u> </u>	Depth (inches): <u> 8 </u>
Saturation Present?	Yes <u> x </u>	No <u> </u>	Depth (inches): <u> 5 </u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Multiple primary and secondary hydrology indicators present. the wetland abuts intermittent Stream 072, that drains west to Wise Run that flows south to Valley Run that flows south to Jonathan Creek that flows east to Muskingum River. a TNW.

Upland 075

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeh-200610-09
 Investigator(s): AEH, SKM Section, Township, Range: S15. T18N. R16W

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.92933 Long: -82.277692 Datum: NAD 83

Soil Map Unit Name: Chili loam, 12 to 18 percent slopes, eroded (ChD2) 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upland 075 is point out located south of Wetland 071. Not a wetland point as hydric soil and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Morus alba</u>	15	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																
2. <u>Ulmus americana</u>	5	Yes	FACW																	
3. <u>Acer saccharinum</u>	5	Yes	FACW																	
4. <u> </u>																				
5. <u> </u>																				
25 = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Ulmus americana</u>	5	Yes	FACW	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>285</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.17</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>90</u> (A)	<u>285</u> (B)	Prevalence Index = B/A = <u>3.17</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>35</u>	x 3 = <u>105</u>																			
FACU species <u>20</u>	x 4 = <u>80</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>90</u> (A)	<u>285</u> (B)																			
Prevalence Index = B/A = <u>3.17</u>																				
2. <u>Morus alba</u>	5	Yes	FAC																	
3. <u> </u>																				
4. <u> </u>																				
5. <u> </u>																				
10 = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Solidago canadensis</u>	20	Yes	FACU	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Alliaria petiolata</u>	15	Yes	FAC																	
3. <u>Verbesina alternifolia</u>	10	No	FACW																	
4. <u>Glycine max</u>	10	No	UPL																	
5. <u> </u>																				
6. <u> </u>																				
7. <u> </u>																				
8. <u> </u>																				
9. <u> </u>																				
10. <u> </u>																				
55 = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u> </u>																				
= Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%.																				

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Hydric Soil Present? Yes _____ No X

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes No X

Wetland 071

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

2 **2**

max 6 pts

subtotal

Metric 1. Wetland Area (size).

Field Id:

w-aeh-20200610-08

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

 acres**3** **5**

max 14 pts.

subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

7.0 **12.0**

max 30 pts.

subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select one.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

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

- ☐ None or none apparent (12)
- ☐ Recovered (7)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

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

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

10 **22**

max 20 pts.

subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☒ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☒ Fair (3)
- ☐ Poor to fair (2)
- ☐ Poor (1)

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

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input checked="" type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> woody debris removal | <input checked="" type="checkbox"/> farming |
| <input checked="" type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

22

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 071

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

Field Id:

w-aeH-20200610-08

22

subtotal this page

0

22

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 5 Qualitative Rating (-10)

5

27

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ 1 Emergent
- ☐ 1 Shrub
- ☐ 0 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☒ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ 0 Vegetated hummocks/tussocks
- ☐ 0 Coarse woody debris >15cm (6in)
- ☐ 0 Standing dead >25cm (10in) dbh
- ☐ 1 Amphibian breeding pools

Vegetation Community Cover Scale

- 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area
- 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

27

GRAND TOTAL(max 100 pts)

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 071	
Date: June 10, 2020	
Description: PSS wetland Category 1 Facing North	

Wetland 071	
Date: June 10, 2020	
Description: PSS wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 071	
Date: June 10, 2020	
Description: PSS wetland Category 1 Facing South	

Wetland 071	
Date: June 10, 2020	
Description: PSS wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 071	
Date: June 10, 2020	
Description: PSS wetland Category 1 Soil Pit	

Wetland 072

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeH-200610-09
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16W
 Landform (hillside, terrace, etc.): depressional Local relief (concave, convex, none): none
 Slope (%): 0 Lat: 39.930260 Long: -82.27863 Datum: NAD 83
 Soil Map Unit Name: Mentor silt loam, 2 to 6 percent slopes (MnB) 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Point in to Wetland 072 is within a depressional area that extends to the southwest outside of the survey area to wooded lot. Potentially isolated.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)			
1.				
2.				
3.				
4.				
5.				
		=Total Cover		
Herb Stratum	(Plot size: <u>5'</u>)			
1.	<u>Typha angustifolia</u>	<u>70</u>	<u>Yes</u>	<u>OBL</u>
2.	<u>Impatiens capensis</u>	<u>20</u>	<u>No</u>	<u>FACW</u>
3.	<u>Agrostis gigantea</u>	<u>15</u>	<u>No</u>	<u>FACW</u>
4.	<u>Rosa multiflora</u>	<u>10</u>	<u>No</u>	<u>FACU</u>
5.	<u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
6.				
7.				
8.				
9.				
10.				
		<u>120</u> =Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)			
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>185</u> (B)
Prevalence Index = B/A = <u>1.54</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation indicator present as Rapid Test.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/1	90	10YR 5/6	10	C	PL	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> ? Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> Very Shallow Dark Surface (F22)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input checked="" type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if observed):								
Type: _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____								
Remarks: This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf) Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations, located in closed depression subject to ponding.								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is required; check all that apply)						Secondary Indicators (minimum of two required)		
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Aquatic Fauna (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)			<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Gauge or Well Data (D9)					
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Other (Explain in Remarks)					
Field Observations:								
Surface Water Present?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>4</u>		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
Saturation Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Multiple primary and secondary hydrology indicators present. The wetland continues to the west outside of the survey area and drians to the west eventually to Wise Run. No identifiable drainage feature connection to downstream features.								

Upland 076

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200610-10
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16W
 Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none
 Slope (%): 0 Lat: 39.93025 Long: -82.278655 Datum: NAD 83
 Soil Map Unit Name: Mentor silt loam, 2 to 6 percent slopes (MnB) 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Upland 076 is point out located south of Wetland 072. Not a wetland point as hydrophytic vegetation criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>30</u></td> <td>x 5 = <u>150</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>315</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.71</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>30</u>	x 5 = <u>150</u>	Column Totals: <u>85</u> (A)	<u>315</u> (B)	Prevalence Index = B/A = <u>3.71</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>15</u>	x 1 = <u>15</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>10</u>	x 3 = <u>30</u>																				
FACU species <u>30</u>	x 4 = <u>120</u>																				
UPL species <u>30</u>	x 5 = <u>150</u>																				
Column Totals: <u>85</u> (A)	<u>315</u> (B)																				
Prevalence Index = B/A = <u>3.71</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Glycine max</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>																		
2. <u>Cirsium arvense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																		
3. <u>Typha angustifolia</u>	<u>15</u>	<u>No</u>	<u>OBL</u>																		
4. <u>Rosa multiflora</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																		
5. <u>Toxicodendron radicans</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																		
6.																					
7.																					
8.																					
9.																					
10.																					
		<u>85</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present.																					

SOIL**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 4/2	95	10YR 6/6	5	C	PL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present?Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicator present as low chroma/high value depleted matrix with required redox concentrations.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

One primary hydrology indicator present. Point out located off edge of ag field.

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Date: June 10, 2020
Wetland: w-aeh-20200610-09	Rater: AH, SM

0	0
Subtotal	Points

Metric 1. Wetland Area (size). (max 6 pts)Select one size class and assign score.

<input type="checkbox"/>	>50 acres (>20.2ha) (6 pts)
<input type="checkbox"/>	25 to <50 acres (10.1 to <20.2ha) (5 pts)
<input type="checkbox"/>	10 to <25 acres (4 to <10.1ha) (4 pts)
<input type="checkbox"/>	3 to <10 acres (1.2 to <4ha) (3 pts)
<input type="checkbox"/>	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
<input type="checkbox"/>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
<input checked="" type="checkbox"/>	<0.1 acres (0.04ha) (0 pts)

1	1
Subtotal	Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)2a. Calculate average buffer width (select one, do not double check)

<input type="checkbox"/>	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
<input type="checkbox"/>	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
<input type="checkbox"/>	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
<input checked="" type="checkbox"/>	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

<input type="checkbox"/>	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
<input type="checkbox"/>	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
<input type="checkbox"/>	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
<input checked="" type="checkbox"/>	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

19	18
Subtotal	Points

Metric 3. Hydrology. (max 30 pts)3a. Sources of Water. Score all that apply.

<input type="checkbox"/>	High pH groundwater (5)
<input type="checkbox"/>	Other groundwater (3)
<input checked="" type="checkbox"/>	Precipitation (1)
<input checked="" type="checkbox"/>	Seasonal/Intermittent surface water (3)
<input type="checkbox"/>	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

<input type="checkbox"/>	100 year floodplain (1)
<input type="checkbox"/>	Between stream/lake and other human use (1)
<input checked="" type="checkbox"/>	Part of wetland/upland (e.g. forest), complex (1)
<input checked="" type="checkbox"/>	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

<input type="checkbox"/>	>0.7 (27.6in) (3)
<input checked="" type="checkbox"/>	0.4 to 0.7m (15.7 to 27.6in) (2)
<input type="checkbox"/>	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	Semi- to permanently inundated/saturated (4)
<input checked="" type="checkbox"/>	Regularly inundated/saturated (3)
<input type="checkbox"/>	Seasonally inundated (2)
<input type="checkbox"/>	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

<input type="checkbox"/>	(select one or double check & average)
<input type="checkbox"/>	None or none apparent (12)
<input checked="" type="checkbox"/>	Recovered (7)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/>	ditch	<input type="checkbox"/>	point source (nonstormwater)
<input type="checkbox"/>	dike	<input type="checkbox"/>	filling/grading
<input type="checkbox"/>	tile	<input type="checkbox"/>	road bed/RR track
<input type="checkbox"/>	weir	<input checked="" type="checkbox"/>	dredging
<input type="checkbox"/>	stormwater input	<input type="checkbox"/>	other - list

34	15
Subtotal	Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)4a. Substrate disturbance. Score one or double check and average.

<input type="checkbox"/>	None or none apparent (4)
<input checked="" type="checkbox"/>	Recovered (3)
<input type="checkbox"/>	Recovering (2)
<input type="checkbox"/>	Recent or no recovery (1)

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

<input checked="" type="checkbox"/>	None or none apparent (9)
<input type="checkbox"/>	Recovered (6)
<input type="checkbox"/>	Recovering (3)
<input type="checkbox"/>	Recent or no recovery (1)

4b. Habitat development. Select one.

<input type="checkbox"/>	Excellent (7)
<input type="checkbox"/>	Very good (6)
<input type="checkbox"/>	Good (5)
<input type="checkbox"/>	Moderately good (4)
<input checked="" type="checkbox"/>	Fair (3)
<input type="checkbox"/>	Poor to fair (2)
<input type="checkbox"/>	Poor (1)

Check all disturbances observed

<input type="checkbox"/>	mowing	<input type="checkbox"/>	shrub/sapling removal
<input type="checkbox"/>	grazing	<input type="checkbox"/>	herbaceous/aquatic bed removal
<input type="checkbox"/>	clearcutting	<input type="checkbox"/>	sedimentation
<input type="checkbox"/>	selective cutting	<input type="checkbox"/>	dredging
<input type="checkbox"/>	woody debris removal	<input type="checkbox"/>	farming
<input type="checkbox"/>	toxic pollutants	<input type="checkbox"/>	nutrient enrichment

Site: Crooksville-North Newark 138 kV Transmission Line Rebuild	Date: June 10, 2020
Wetland: w-aeH-20200610-09	Rater: AH, SM

34	subtotal first page
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34	0
Subtotal	Points

Metric 5. Special Wetlands. (max 10 pts.)Check all that apply and score as indicated

<input type="checkbox"/>	Bog (10 pts)
<input type="checkbox"/>	Fen (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)
<input type="checkbox"/>	Mature forested wetland (5 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
<input type="checkbox"/>	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
<input type="checkbox"/>	Lake Plain Sand Prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Relict Wet Prairies (10 pts)
<input type="checkbox"/>	Known occurrence state/federal threatened or endangered species (10)
<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat or usage (10 pts)
<input type="checkbox"/>	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

37	3
Subtotal	Points

Metric 6. Plant Communities, interspersions, microtopography. (max 20 pts.)6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

<input type="checkbox"/>	Aquatic bed
2	Emergent
<input type="checkbox"/>	Shrub
<input type="checkbox"/>	Forest
<input type="checkbox"/>	Mudflats
<input type="checkbox"/>	Open water
<input type="checkbox"/>	Other (list)

6b. Horizontal (plan view) interspersions

Select only one

<input type="checkbox"/>	High (5)
<input type="checkbox"/>	Moderately high (4)
<input type="checkbox"/>	Moderate (3)
<input type="checkbox"/>	Moderately low (2)
<input type="checkbox"/>	Low (1)
x	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

<input type="checkbox"/>	Extensive >75 % cover (-5)
x	Moderate 25-75% cover (-3)
<input type="checkbox"/>	Sparse 5-25% cover (-1)
<input type="checkbox"/>	Nearly Absent <5% cover (0)
<input type="checkbox"/>	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
2	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres to 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
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


37	GRAND TOTAL (max 100 pts)
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Provisional Wetland Category:

modified 2

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 072	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing North	

Wetland 072	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 072	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing South	

Wetland 072	
Date: June 10, 2020	
Description: PEM wetland Category 2 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 072	
Date: June 10, 2020	
Description: PEM wetland Category 2 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200610-05
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16W

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.938128 Long: -82.28507 Datum: NAD 83

Soil Map Unit Name: Killbuck silt loam, frequently flooded (Kk) 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? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Point in to Wetland 073 is located along a hillslope bottom near a roadway. The wetland extends outside the survey corridor and is within the 100-year floodplain of perennial Stream 076 (Wise Run).	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
					=Total Cover
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>15'</u>)				
1.					
2.					
3.					
4.					
5.					
					=Total Cover
<u>Herb Stratum</u>	(Plot size: <u>5'</u>)				
1.	<u>Phalaris arundinacea</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Carex annectens</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Eleocharis palustris</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	
4.	<u>Lysimachia nummularia</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
5.	<u>Juncus effusus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
6.	<u>Vernonia gigantea</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
7.					
8.					
9.					
10.					
					<u>118</u> =Total Cover
<u>Woody Vine Stratum</u>	(Plot size: <u>30'</u>)				
1.					
2.					
					=Total Cover

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>30</u>	x 1 = <u>30</u>
FACW species <u>85</u>	x 2 = <u>170</u>
FAC species <u>3</u>	x 3 = <u>9</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>118</u> (A)	<u>209</u> (B)
Prevalence Index = B/A = <u>1.77</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation indicator present as rapid test.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 5/1	90	10YR 6/6	10	C	PL	Loamy/Clayey	Prominent redox concentrations
6-18	10YR 5/1	60	10YR 6/6	40	C	PL	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input checked="" type="checkbox"/> Redox Depressions (F8)
	³ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
 Hydric soil indicator present as low chroma/high value depleted matrix in a depression subject to ponding.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 5 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 3 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Multiple primary and secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff in geomorphic position. Wetland is adjacent to perennial Stream 076 (Wise Run) that flows south to Valley Run that flows south to Jonathan Creek that flows east to Muskingum River, a TNW.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeH-200610-05
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16W
 Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none
 Slope (%): 0 Lat: 39.938198 Long: -82.285004 Datum: NAD 83
 Soil Map Unit Name: Killbuck silt loam, frequently flooded (Kk) 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? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Upland 077 is point out located north of Wetland 073 near planted crops. Not a wetland point as hydrophytic vegetation and hydrology criteria not met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover			Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>325</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.06</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>80</u> (A)	<u>325</u> (B)	Prevalence Index = B/A = <u>4.06</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>15</u>	x 3 = <u>45</u>																				
FACU species <u>45</u>	x 4 = <u>180</u>																				
UPL species <u>20</u>	x 5 = <u>100</u>																				
Column Totals: <u>80</u> (A)	<u>325</u> (B)																				
Prevalence Index = B/A = <u>4.06</u>																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)																				
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Schedonorus arundinaceus</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2.	<u>Glycine max</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
3.	<u>Poa pratensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4.	<u>Allium cernuum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5.	<u>Juncus tenuis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
6.	<u>Trifolium repens</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7.																					
8.																					
9.																					
10.																					
		80 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present.																					

[illegible]

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
One primary hydrology indicator present. Point out located adjacent to mapped 100-year floodplain of Wise Run.			

Wetland 073

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

2 2

max 6 pts

subtotal

Metric 1. Wetland Area (size).

Field Id:

w-aeh-20200610-05

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

 acres**3 5**

max 14 pts.

subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
☐ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

10.0 15.0

max 30 pts.

subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
☐ Other groundwater (3)
☒ Precipitation (1)
☐ Seasonal/intermittent surface water (3)
☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select one.

- ☐ >0.7 (27.6in) (3)
☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
☒ <0.4m (<15.7in) (1)

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

- ☐ None or none apparent (12)
☒ Recovered (7)
☒ Recovering (3)
☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
☒ Between stream/lake and other human use (1)
☐ Part of wetland/upland (e.g. forest), complex (1)
☐ Part of riparian or upland corridor (1)

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

- ☐ Semi- to permanently inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

7.5 22.5

max 20 pts.

subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
☒ Recovered (3)
☒ Recovering (2)
☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
☐ Very good (6)
☐ Good (5)
☐ Moderately good (4)
☐ Fair (3)
☒ Poor to fair (2)
☐ Poor (1)

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

- ☐ None or none apparent (9)
☐ Recovered (6)
☒ Recovering (3)
☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input checked="" type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> woody debris removal | <input checked="" type="checkbox"/> farming |
| <input checked="" type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

22.5

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 073

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

22.5

subtotal this page

0 22.5

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
☐ Fen (10)
☐ Old growth forest (10)
☐ Mature forested wetland (5)
☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
☐ Lake Plain Sand Prairies (Oak Openings) (10)
☐ Relict Wet Prairies (10)
☐ Known occurrence state/federal threatened or endangered species (10)
☐ Significant migratory songbird/water fowl habitat or usage (10)
☐ Category 1 Wetland. See Question 5 Qualitative Rating (-10)

0 22.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.**6a. Wetland Vegetation Communities.**

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
☒ 1 Emergent
☐ Shrub
☐ Forest
☐ Mudflats
☐ Open water
☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
☐ Moderately high(4)
☐ Moderate (3)
☐ Moderately low (2)
☐ Low (1)
☒ x None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
☒ x Moderate 25-75% cover (-3)
☐ Sparse 5-25% cover (-1)
☐ Nearly absent <5% cover (0)
☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ 0 Vegetated hummocks/tussocks
☐ 1 Coarse woody debris >15cm (6in)
☐ 0 Standing dead >25cm (10in) dbh
☐ 1 Amphibian breeding pools

Field Id:

w-aeH-20200610-05

Vegetation Community Cover Scale

- 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area
1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

22.5 GRAND TOTAL(max 100 pts)

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 073	
Date: June 10, 2020	
Description: PEM wetland Category 1 Facing North	

Wetland 073	
Date: June 10, 2020	
Description: PEM wetland Category 1 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 073	
Date: June 10, 2020	
Description: PEM wetland Category 1 Facing South	

Wetland 073	
Date: June 10, 2020	
Description: PEM wetland Category 1 Facing West	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 073	
Date: June 10, 2020	
Description: PEM wetland Category 1 Soil Pit	

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeh-200610-01
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.939744 Long: -82.28606 Datum: NAD 83

Soil Map Unit Name: Melvin silt loam, 0 to 3 percent slopes, frequently flooded (Me) NWI classification: R5UBH

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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Wetland 074a is point in for the PFO portion of the PEM/PFO wetland 74. The Wetland extends to the east and west outside of the survey corridor, abutting perennial Stream 076 (Wise Run), located in abandoned channel of stream at toe of slope.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u>Salix nigra</u>	<u>45</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Ulmus rubra</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
3. <u>Platanus occidentalis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
	<u>65</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>45</u></td> <td>x 1 = <u>45</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>127</u> (A)</td> <td><u>238</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.87</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>45</u>	x 1 = <u>45</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>127</u> (A)	<u>238</u> (B)	Prevalence Index = B/A = <u>1.87</u>	
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5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
	<u> </u>	=Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Phalaris arundinacea</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Lysimachia nummularia</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Impatiens capensis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Poa pratensis</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
5. <u>Toxicodendron radicans</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
6. <u>Solidago gigantea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
7. <u>Parthenocissus quinquefolia</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
	<u>62</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
	<u> </u>	=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as dominance test > 50%.																				

Sampling Point: -aeh-200610-

Midwest Region – Version 2.0

Wetland 074b

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: w-aeH-200610-04b
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.93905 Long: -82.2858 Datum: NAD 83

Soil Map Unit Name: Melvin silt loam, 0 to 3 percent slopes, frequently flooded (Me) 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? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Wetland 074b is the PEM portion of the PEM/PFO wetland 74. The wetland extends to the east and west outside of the survey corridor, abutting perennial Stream 076 (Wise Run), located in abandoned channel of stream at toe of slope.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
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2. <u> </u>																					
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Prevalence Index = B/A = <u>1.22</u>																					
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																					
1. <u>Salix nigra</u>		<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u> </u>																					
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Herb Stratum (Plot size: <u>5'</u>)					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Acorus americanus</u>		<u>60</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Phalaris arundinacea</u>		<u>15</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Scirpus atrovirens</u>		<u>5</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Onoclea sensibilis</u>		<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Eleocharis palustris</u>		<u>3</u>	<u>No</u>	<u>OBL</u>																	
6. <u>Carex annectens</u>		<u>2</u>	<u>No</u>	<u>FACW</u>																	
7. <u> </u>																					
8. <u> </u>																					
9. <u> </u>																					
10. <u> </u>																					
		=Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1. <u> </u>																					
2. <u> </u>																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation indicator present as rapid test.																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Midwest Region – Version 2.0

Upland 078

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 06/10/2020
 Applicant/Owner: AEP State: OH Sampling Point: upl-aeH-200610-04
 Investigator(s): AEH, SKM Section, Township, Range: S10. T18N. R16N

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none

Slope (%): 0 Lat: 39.939722 Long: -82.286145 Datum: NAD 83

Soil Map Unit Name: Melvin silt loam, 0 to 3 percent slopes, frequently flooded (Me) 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? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upland 078 is point out located west of Wetland 074 between the wetland and perennial Stream 076. Not a wetland point as no wetland criteria met.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
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Herb Stratum (Plot size: <u>5'</u>)																					
1.	<u>Trifolium repens</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2.	<u>Poa pratensis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3.	<u>Schedonorus arundinaceus</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
4.	<u>Solidago hispida</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
5.	<u>Trifolium pratense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
6.	<u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7.	<u>Juncus tenuis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
8.	<u>Rumex crispus</u>	<u>3</u>	<u>No</u>	<u>FAC</u>																	
9.																					
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		108 =Total Cover																			
Woody Vine Stratum (Plot size: <u>30'</u>)																					
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present.																					

SOIL

Sampling Point: l-aeH-200610

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No hydrology indicators present.			

Wetland 074ab

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

2 **2**

max 6 pts

subtotal

Metric 1. Wetland Area (size).

Field Id:

w-aeh-20200610-04

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

 acres**8** **10**

max 14 pts.

subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
☒ LOW. Old field (>10 years), shrubland, young second growth forest. (5)
☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

17.0 **27.0**

max 30 pts.

subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
☐ Other groundwater (3)
☒ Precipitation (1)
☒ Seasonal/Intermittent surface water (3)
☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select one.

- ☐ >0.7 (27.6in) (3)
☒ 0.4 to 0.7m (15.7 to 27.6in) (2)
☐ <0.4m (<15.7in) (1)

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

- ☐ None or none apparent (12)
☒ Recovered (7)
☐ Recovering (3)
☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☒ 100 year floodplain (1)
☒ Between stream/lake and other human use (1)
☐ Part of wetland/upland (e.g. forest), complex (1)
☐ Part of riparian or upland corridor (1)

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

- ☐ Semi- to permanently inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

11.5 **38.5**

max 20 pts.

subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
☒ Recovered (3)
☐ Recovering (2)
☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
☐ Very good (6)
☐ Good (5)
☒ Moderately good (4)
☐ Fair (3)
☐ Poor to fair (2)
☐ Poor (1)

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

- ☐ None or none apparent (9)
☒ Recovered (6)
☒ Recovering (3)
☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input checked="" type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

38.5

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 074ab

Site: Crooksville- Newark Project

Rater(s): Audrey Hanner

Date:

6/10/2020

Field Id:

w-aeH-20200610-04

38.5

subtotal this page

0 38.5

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
☐ Fen (10)
☐ Old growth forest (10)
☐ Mature forested wetland (5)
☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
☐ Lake Plain Sand Prairies (Oak Openings) (10)
☐ Relict Wet Prairies (10)
☐ Known occurrence state/federal threatened or endangered species (10)
☐ Significant migratory songbird/water fowl habitat or usage (10)
☐ Category 1 Wetland. See Question 5 Qualitative Rating (-10)

8 46.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.**6a. Wetland Vegetation Communities.**

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
☐ Emergent
☐ Shrub
☐ Forest
☐ Mudflats
☐ Open water
☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
☐ Moderately high(4)
☐ Moderate (3)
☒ Moderately low (2)
☐ Low (1)
☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
☐ Moderate 25-75% cover (-3)
☒ Sparse 5-25% cover (-1)
☐ Nearly absent <5% cover (0)
☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
☐ Coarse woody debris >15cm (6in)
☐ Standing dead >25cm (10in) dbh
☐ Amphibian breeding pools

Vegetation Community Cover Scale

- 0 Absent or comprises <0.1ha (0.2471 acres) contiguous area
1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 2

46.5 GRAND TOTAL(max 100 pts)

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 074a	
Date: June 10, 2020	
Description: PFO wetland Category 2 Facing North	

Wetland 074a	
Date: June 10, 2020	
Description: PFO wetland Category 2 Facing East	

Client Name: AEP	Site Location: Crooksville-North Newark 138 kV Transmission Line Rebuild Project	Project No. 60616110
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Wetland 074a	
Date: June 10, 2020	
Description: PFO wetland Category 2 Facing South	

Wetland 074a	
Date: June 10, 2020	
Description: PFO wetland Category 2 Facing West	

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

12/2/2021 2:59:59 PM

in

Case No(s). 21-1206-EL-BLN

Summary: Notice Letter of Notification Part 7 electronically filed by Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc.