

VEGETATION – Use scientific names of plants

 Sampling Point: SP-43

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer rubrum</u>		30 %	Y	FAC	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%</u> (A/B)
2. <u>Sassafras albidum</u>		40 %	Y	FACU	
3. <u>Quercus palustris</u>		25 %	Y	FACW	
4. <u>Prunus serotina</u>		10 %	N	FACU	
5. _____		%			
6. _____		%			
7. _____		%			
		105 %	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: _____ Multiply by: _____ </div> OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0</u> % (A) <u>0</u> (B) Prevalence Index = B/A = _____
		30 %	= Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Crataegus phaenopyrum</u>		25 %	Y	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2. <u>Prunus serotina</u>		5 %	N	FACU	
3. _____		%			
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		30 %	= Total Cover		
Herb Stratum	(Plot size: <u>5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rosa multiflora</u>		30 %	Y	FACU	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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. _____		%			
3. _____		%			
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
8. _____		%			
9. _____		%			
10. _____		%			
11. _____		%			
12. _____		%			
		30 %	= Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____		%			
2. _____		%			
3. _____		%			
4. _____		%			
		0 %	= Total Cover		

Remarks (include photo numbers here or on a separate sheet): Photograph C-13.

SOIL

Sampling Point: SP-43

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		
0-10	10YR 3/2	100					Silt loam	
10-20	2.5Y 5/4	100					Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** No hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-51
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 41.410973 Long: -82.124583 Datum: NAD 83
 Soil Map Unit Name: Mahoning-Tiro silt loams, 2 to 6 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)
 Significantly Disturbed?

Vegetation	Soil	Hydrology
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 Are "Normal Circumstances" present? ☒ Yes ☐ No
 Naturally Problematic?

Vegetation	Soil	Hydrology
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 (If needed, explain any answers in Remarks)

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

	Yes	No	
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Remarks: Wetland hydrology is absent. Therefore the sample plot is not located within a wetland.
Hydric Soil Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one 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"/> Marl Deposits (B15) <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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)																						
<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Field Observations:</th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> <th style="text-align: center;">Depth (inches):</th> </tr> <tr> <td>Surface Water Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Water Table Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Saturation Present? (includes capillary fringe)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> </tr> </table>			Field Observations:	Yes	No	Depth (inches):	Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:	
Field Observations:	Yes	No	Depth (inches):																					
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____																					
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____																					
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____																					
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																						
Remarks: No wetland hydrology indicator is present.																								

VEGETATION – Use scientific names of plants

 Sampling Point: SP-51

Tree Stratum	(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer rubrum</u>		60 %	Y	FAC	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>63%</u> (A/B)
2. <u>Sassafras albidum</u>		20 %	Y	FACU	
3. <u>Populus deltoides</u>		20 %	Y	FAC	
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		100 %	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0</u> % (A) <u>0</u> % (B) Prevalence Index = B/A = _____
					Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
					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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
					Remarks (include photo numbers here or on a separate sheet): Photograph C-14.

SOIL

Sampling Point: SP-51

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		
0-14	10YR 3/1	90	10YR 3/6	10	C	M	Silt loam	
14-20	10YR 3/2	90	7.5YR 5/6	10	C	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <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 checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR, K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR, K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR, K, L) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <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:** Hydric soil indicator F6 is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-52
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 41.410966 Long: -82.124565 Datum: NAD 83
 Soil Map Unit Name: Mahoning-Tiro silt loams, 0 to 2 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)
 Significantly Disturbed?

Vegetation	Soil	Hydrology
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 Are "Normal Circumstances" present? ☒ Yes ☐ No
 Naturally Problematic?

Vegetation	Soil	Hydrology
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 (If needed, explain any answers in Remarks)

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

	Yes	No	
Hydrophytic Vegetation Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Remarks:
Hydric Soil Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators:				<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one required; check all that apply)</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"/> Marl Deposits (B15)		<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)				<input type="checkbox"/> Microtopographic Relief (D4)
				<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	Yes	No	Depth (inches):	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Remarks: No wetland hydrology indicator is present.				

VEGETATION – Use scientific names of plants

 Sampling Point: SP-52

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Sassafras albidum</u>		30 %	Y	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>43%</u> (A/B)
2. <u>Quercus palustris</u>		50 %	Y	FACW	
3. <u>Populus deltoides</u>		30 %	Y	FAC	
4. <u>Acer rubrum</u>		5 %	N	FAC	
5. _____		%			
6. _____		%			
7. _____		%			
		<u>115 %</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0 %</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
		<u>60 %</u>	= Total Cover		
		<u>122 %</u>	= Total Cover		
		<u>0 %</u>	= Total Cover		
		<u>0 %</u>	= Total Cover		
		<u>0 %</u>	= Total Cover		
		<u>0 %</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.					
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Remarks (include photo numbers here or on a separate sheet): Photograph C-15.					

SOIL

Sampling Point: SP-52

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		
0-12	10YR 3/2	98	7.5YR 5/6	2	C	M	Silt loam	
12-16	10YR 4/2	95	7.5YR 5/6	5	C	M	Silt loam	
16-20	2.5Y 5/2	90	7.5YR 5/6	10	C	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <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"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR, K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR, K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR, K, L) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <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:** No hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-53
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 41.410951 Long: -82.124373 Datum: NAD 83
 Soil Map Unit Name: Mahoning-Tiro silt loams, 2 to 6 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)
 Significantly Disturbed? Vegetation ☐ Soil ☐ Hydrology ☐ Are "Normal Circumstances" present? ☒ Yes ☐ No
 Naturally Problematic? ☐ ☐ ☐ (If needed, explain any answers in Remarks)

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

	Yes	No	
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Remarks: This sample plot is not within a wetland because no wetland hydrology indicators are present.
Hydric Soil Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators:			<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one required; check all that apply)</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"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Microtopographic Relief (D4)
			<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	Yes	No	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Remarks: No wetland hydrology indicator is present.			

VEGETATION – Use scientific names of plants

 Sampling Point: SP-53

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____		%			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%</u> (A/B)
2. _____		%			
3. _____		%			
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		<u>0 %</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: _____ Multiply by: _____ </div> OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0 %</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1. <u>Frangula alnus</u>		50 %	Y	FAC	
2. <u>Cornus alba</u>		25 %	Y	FACW	
3. <u>Populus deltoides</u>		5 %	N	FAC	
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		<u>80 %</u>	= Total Cover		
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 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>		5 %	N	FACU	
2. <u>Agrostis stolonifera</u>		10 %	N	FACW	
3. <u>Juncus effusus</u>		10 %	N	OBL	
4. <u>Rubus allegheniensis</u>		20 %	Y	FACU	
5. <u>Rosa multiflora</u>		50 %	Y	FACU	
6. <u>Carex blanda</u>		20 %	Y	FAC	
7. _____		%			
8. _____		%			
9. _____		%			
10. _____		%			
11. _____		%			
12. _____		%			
		<u>115 %</u>	= Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)				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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1. _____		%			
2. _____		%			
3. _____		%			
4. _____		%			
		<u>0 %</u>	= Total Cover		
Remarks (include photo numbers here or on a separate sheet): Photograph C-16.					

SOIL

Sampling Point: SP-53

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 3/1	100					Silt loam	
6-16	10YR 3/1	98	7.5YR 5/6	2	C	M	Silt loam	
16-20	10YR 5/1	90	7.5YR 5/6	10	C	M	Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1) ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Histic Epipedon (A2) ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Stratified Layers (A5) ☐ 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)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** Hydric soil indicator F6 is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-54
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 41.410965 Long: -82.126009 Datum: NAD 83
 Soil Map Unit Name: Mahoning-Tiro silt loams, 0 to 2 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)

	Vegetation	Soil	Hydrology	
Significantly Disturbed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are "Normal Circumstances" present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Naturally Problematic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(If needed, explain any answers in Remarks)

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

	Yes	No	
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Remarks:
Hydric Soil Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators:				<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one required; check all that apply)</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"/> Marl Deposits (B15)		<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)				<input type="checkbox"/> Microtopographic Relief (D4)
				<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	Yes	No	Depth (inches):	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Remarks: No wetland hydrology indicator is present.				

VEGETATION – Use scientific names of plants

Sampling Point: SP-54

Tree Stratum		(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Liriodendron tulipifera</i>		40 %	Y	FACU
2.	<i>Acer rubrum</i>		40 %	Y	FAC
3.	<i>Sassafras albidum</i>		20 %	N	FACU
4.	<i>Nyssa sylvatica</i>		15 %	N	FAC
5.			%		
6.			%		
7.			%		
			115 %	= Total Cover	
Sapling/Shrub Stratum		(Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Frangula alnus</i>		40 %	Y	FAC
2.	<i>Acer rubrum</i>		15 %	Y	FAC
3.			%		
4.			%		
5.			%		
6.			%		
7.			%		
			55 %	= Total Cover	
Herb Stratum		(Plot size: 5')	Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Frangula alnus</i>		20 %	Y	FAC
2.	<i>Rosa multiflora</i>		50 %	Y	FACU
3.	<i>Sanicula odorata</i>		10 %	N	FAC
4.	<i>Impatiens capensis</i>		2 %	N	FACW
5.			%		
6.			%		
7.			%		
8.			%		
9.			%		
10.			%		
11.			%		
12.			%		
			77 %	= Total Cover	
Woody Vine Stratum		(Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Vitis riparia</i>		5 %	Y	FAC
2.			%		
3.			%		
4.			%		
			5 %	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species %	x 1 = 0
FACW species %	x 2 = 0
FAC species %	x 3 = 0
FACU species %	x 4 = 0
UPL species %	x 5 = 0
Column Totals: 0 % (A)	0 (B)

Prevalence Index = B/A =

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)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

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, regardless of size, and woody plants less than 3.28 ft tall.

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks (include photo numbers here or on a separate sheet): Photograph C-17.

SOIL

Sampling Point: SP-54

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		
0-10	10YR 3/2	100					Silt loam	
10-16	10YR 5/6	70	10YR 5/1	30	D	M	Silt clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <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"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR, K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR, K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR, K, L) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <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:** No hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-55
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR or MLRA): LRR R Lat: 41.410614 Long: -82.126036 Datum: NAD 83
 Soil Map Unit Name: Haskins loam, 0 to 2 percent slopes NWI Classification: PFO (W-21)
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)
 Significantly Disturbed?

Vegetation	Soil	Hydrology
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 Are "Normal Circumstances" present? ☒ Yes ☐ No
 Naturally Problematic?

Vegetation	Soil	Hydrology
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 (If needed, explain any answers in Remarks)

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

	Yes	No	Remarks:
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hydric Soil Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wetland Hydrology Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" 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"/> Marl Deposits (B15) <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"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)																				
Field Observations: <table border="0" style="width: 100%;"> <tr> <td style="width: 40%;"></td> <td style="width: 10%; text-align: center;">Yes</td> <td style="width: 10%; text-align: center;">No</td> <td style="width: 40%; text-align: center;">Depth (inches):</td> </tr> <tr> <td>Surface Water Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Water Table Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Saturation Present? (includes capillary fringe)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> </table>		Yes	No	Depth (inches):	Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Wetland Hydrology Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:		
	Yes	No	Depth (inches):																				
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____																				
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____																				
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____																				
Wetland Hydrology Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>																					
Remarks: Wetland hydrology indicators B9, B10, D2, and D5 are present.																							

VEGETATION – Use scientific names of plants

 Sampling Point: SP-55

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>		100 %	Y	FAC
2. _____		%		
3. _____		%		
4. _____		%		
5. _____		%		
6. _____		%		
7. _____		%		
		100 % = Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)			
1. <u>Ulmus americana</u>		20 %	Y	FACW
2. _____		%		
3. _____		%		
4. _____		%		
5. _____		%		
6. _____		%		
7. _____		%		
		20 % = Total Cover		
Herb Stratum	(Plot size: <u>5'</u>)			
1. <u>Carex stipata</u>		40 %	Y	OBL
2. <u>Frangula alnus</u>		5 %	N	FAC
3. <u>Onoclea sensibilis</u>		10 %	N	FACW
4. <u>Pilea pumila</u>		5 %	N	FACW
5. _____		%		
6. _____		%		
7. _____		%		
8. _____		%		
9. _____		%		
10. _____		%		
11. _____		%		
12. _____		%		
		60 % = Total Cover		
Woody Vine Stratum	(Plot size: <u>30'</u>)			
1. <u>Vitis riparia</u>		5 %	Y	FAC
2. _____		%		
3. _____		%		
4. _____		%		
		5 % = Total Cover		

Remarks (include photo numbers here or on a separate sheet): Photograph C-18.

Dominance Test worksheet:

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u> %	x 1 = <u>0</u>
FACW species <u> </u> %	x 2 = <u>0</u>
FAC species <u> </u> %	x 3 = <u>0</u>
FACU species <u> </u> %	x 4 = <u>0</u>
UPL species <u> </u> %	x 5 = <u>0</u>
Column Totals: <u>0</u> % (A)	<u>0</u> (B)
Prevalence Index = B/A = <u> </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)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

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, regardless of size, and woody plants less than 3.28 ft tall.

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

SOIL

Sampling Point: SP-55

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	100	10YR 5/6	5	C	M	Silt loam	
4-10	10YR 4/1	95	7.5YR 5/6	5	C	M	Silt loam	
10-20	10YR 4/1	90	7.5YR 3/4	10	C	M	Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1) ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Histic Epipedon (A2) ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Stratified Layers (A5) ☐ 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)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** Hydric soil indicators A11 and F3 are present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-56
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 41.410907 Long: -82.127355 Datum: NAD 83
 Soil Map Unit Name: Haskins loam, 0 to 2 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)

	Vegetation	Soil	Hydrology	
Significantly Disturbed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are "Normal Circumstances" present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Naturally Problematic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(If needed, explain any answers in Remarks)

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

	Yes	No	Remarks:
Hydrophytic Vegetation Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hydric Soil Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one 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"/> Marl Deposits (B15) <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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)																							
<table style="width: 100%; border: none;"> <tr> <th style="width: 20%;">Field Observations:</th> <th style="width: 10%;">Yes</th> <th style="width: 10%;">No</th> <th style="width: 10%;">Depth (inches):</th> </tr> <tr> <td>Surface Water Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td>Water Table Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td>Saturation Present? (includes capillary fringe)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> </tr> </table>			Field Observations:	Yes	No	Depth (inches):	Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:		
Field Observations:	Yes	No	Depth (inches):																						
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																							
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																							
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>																							
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																							
Remarks: No wetland hydrology indicator is present.																									

VEGETATION – Use scientific names of plants

 Sampling Point: SP-56

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____		%		
2. _____		%		
3. _____		%		
4. _____		%		
5. _____		%		
6. _____		%		
7. _____		%		
		0 %	= Total Cover	
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)			
1. <u>Liriodendron tulipifera</u>		50 %	Y	FACU
2. <u>Acer rubrum</u>		40 %	Y	FAC
3. <u>Fraxinus americana</u>		10 %	N	FACU
4. <u>Salix nigra</u>		2 %	N	OBL
5. _____		%		
6. _____		%		
7. _____		%		
		102 %	= Total Cover	
Herb Stratum	(Plot size: <u>5'</u>)			
1. <u>Rubus allegheniensis</u>		30 %	Y	FACU
2. <u>Rosa multiflora</u>		50 %	Y	FACU
3. <u>Impatiens capensis</u>		5 %	N	FACW
4. <u>Solidago canadensis</u>		2 %	N	FACU
5. <u>Muhlenbergia frondosa</u>		40 %	Y	FACW
6. _____		%		
7. _____		%		
8. _____		%		
9. _____		%		
10. _____		%		
11. _____		%		
12. _____		%		
		127 %	= Total Cover	
Woody Vine Stratum	(Plot size: <u>30'</u>)			
1. _____		%		
2. _____		%		
3. _____		%		
4. _____		%		
		0 %	= 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: 5 (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____ %	x 1 = <u>0</u>
FACW species _____ %	x 2 = <u>0</u>
FAC species _____ %	x 3 = <u>0</u>
FACU species _____ %	x 4 = <u>0</u>
UPL species _____ %	x 5 = <u>0</u>
Column Totals: <u>0</u> % (A)	<u>0</u> (B)

 Prevalence Index = B/A = _____

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)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

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, regardless of size, and woody plants less than 3.28 ft tall.
Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks (include photo numbers here or on a separate sheet): Photograph C-19.

SOIL

Sampling Point: SP-56

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 3/2	100					Silt loam	
6-10	10YR 4/2	90	7.5 YR 3/4	10	C	M	Silt loam	
10-20	2.5Y 4/5	95	7.5YR 3/4	5	C	M	Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1) ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Histic Epipedon (A2) ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Stratified Layers (A5) ☐ 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)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** Hydric soil indicators F3 is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 6/6/2013
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-57
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2
 Subregion (LRR or MLRA): LRR R Lat: 41.410422 Long: -82.126946 Datum: NAD 83
 Soil Map Unit Name: Mahoning-Tiro silt loams, 2 to 6 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)
 Significantly Disturbed? Vegetation ☐ Soil ☐ Hydrology ☐ Are "Normal Circumstances" present? ☒ Yes ☐ No
 Naturally Problematic? ☐ ☐ ☐ (If needed, explain any answers in Remarks)

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

	Yes	No	
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Remarks:
Hydric Soil Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators:			<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one required; check all that apply)</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"/> Marl Deposits (B15)		<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Microtopographic Relief (D4)
			<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	Yes	No	
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Remarks: No wetland hydrology indicator is present.			

VEGETATION – Use scientific names of plants

 Sampling Point: SP-57

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer rubrum</u>		50 %	Y	FAC	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>6</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. <u>Liriodendron tulipifera</u>		40 %	Y	FACU	
3. <u>Ulmus rubra</u>		10 %	N	FAC	
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		100 %	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0</u> % (A) <u>0</u> (B) Prevalence Index = B/A = _____
		55 %	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
		135 %	= 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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		25 %	= Total Cover		Remarks (include photo numbers here or on a separate sheet): Photograph C-20.

SOIL

Sampling Point: SP-57

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 3/2	100					Silt loam	
8-20	10YR 4/6	95	10YR 7/1	5	D	M	Silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** No hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 11/13/2014
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-110
 Investigator(s): G. Shaw Section, Township, Range: T6N, R17W
 Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 41.411098 Long: -82.12765 Datum: NAD 83
 Soil Map Unit Name: Haskins loam, 0 to 2 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☐ Yes ☒ No (If no, explain in Remarks)

	Vegetation	Soil	Hydrology	
Significantly Disturbed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are "Normal Circumstances" present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Naturally Problematic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(If needed, explain any answers in Remarks)

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

	Yes	No	Remarks:
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hydric Soil Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one 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"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations:	<table border="0"> <tr> <td>Yes</td> <td>No</td> <td>Depth (inches):</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>_____</td> </tr> </table>	Yes	No	Depth (inches):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
Yes	No	Depth (inches):															
<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____															
<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____															
<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____															
<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____															

Remarks: Wetland hydrology indicator D5 is present. A wetland may have been present at this location in the past. However, the drainage ditch east of the sample plot has lowered the water table.

VEGETATION – Use scientific names of plants

 Sampling Point: SP-110

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer saccharinum</u>		40 %	Y	FACW	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%</u> (A/B)
2. <u>Acer rubrum</u>		40 %	Y	FAC	
3. <u>Populus deltoides</u>		10 %	N	FAC	
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		<u>90 %</u> = Total Cover			Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div> OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0 %</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
		<u>25 %</u> = Total Cover			Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
		<u>27 %</u> = 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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<u>10 %</u> = Total Cover			Remarks (include photo numbers here or on a separate sheet): Photograph C-21.

SOIL

Sampling Point: SP-110

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 3/2	100					Silty clay	
6-14	10YR 3/2	98	7.5YR 3/4	2	C	M	Silty clay	
14-20	10YR 4/1	90	7.5YR 3/4	10	C	M	Silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1) ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Histic Epipedon (A2) ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Stratified Layers (A5) ☐ 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)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** Hydric soil indicator F6 is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lake Avenue Substation Project City/County: Lorain County Sampling Date: 11/13/2014
 Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: SP-111
 Investigator(s): G. Shaw Section, Township, Range: T6N R17W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 41.410376 Long: -82.127712 Datum: NAD 83
 Soil Map Unit Name: Haskins loam, 0 to 2 percent slopes NWI Classification: Upland
 Are climate/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks)
 Significantly Disturbed? Vegetation ☐ Soil ☐ Hydrology ☐ Are "Normal Circumstances" present? ☒ Yes ☐ No
 Naturally Problematic? ☐ ☐ ☐ (If needed, explain any answers in Remarks)

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

	Yes	No	Remarks:
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hydric Soil Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is the Sampled Area within a Wetland?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (<i>minimum of two required</i>)
<u>Primary Indicators (minimum of one required; check all that apply)</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"/> Marl Deposits (B15)			<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)				<input type="checkbox"/> Microtopographic Relief (D4)
				<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	Yes	No	Depth (inches):	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
Surface Water Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Water Table Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Saturation Present? (includes capillary fringe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	
Wetland Hydrology Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Remarks: No wetland hydrology indicator is present. A drainage ditch to the east of the sample plot likely lowered the water table at this location.				

VEGETATION – Use scientific names of plants

 Sampling Point: SP-111

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer rubrum</u>		80 %	Y	FAC	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>63%</u> (A/B)
2. <u>Quercus palustris</u>		10 %	N	FACW	
3. <u>Acer saccharinum</u>		5 %	N	FACW	
4. _____		%			
5. _____		%			
6. _____		%			
7. _____		%			
		<u>95 %</u> = Total Cover			Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div> OBL species _____ % x 1 = <u>0</u> FACW species _____ % x 2 = <u>0</u> FAC species _____ % x 3 = <u>0</u> FACU species _____ % x 4 = <u>0</u> UPL species _____ % x 5 = <u>0</u> Column Totals: <u>0 %</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = 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, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			Remarks (include photo numbers here or on a separate sheet): Photograph C-22.
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			
		<u>40 %</u> = Total Cover			
		<u>25 %</u> = Total Cover			

SOIL

Sampling Point: SP-111

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 3/2	100					Silt loam	
8-20	2.5Y 5/4	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7) (**LRR R, MLRA 149B**)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR, K, L**)
☐ Thin Dark Surface (S9) (**LRR, K, L**)
☐ Iron-Manganese Masses (F12) (**LRR, K, L**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ 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:** No hydric soil indicator is present.

APPENDIX C - SITE PHOTOGRAPHS



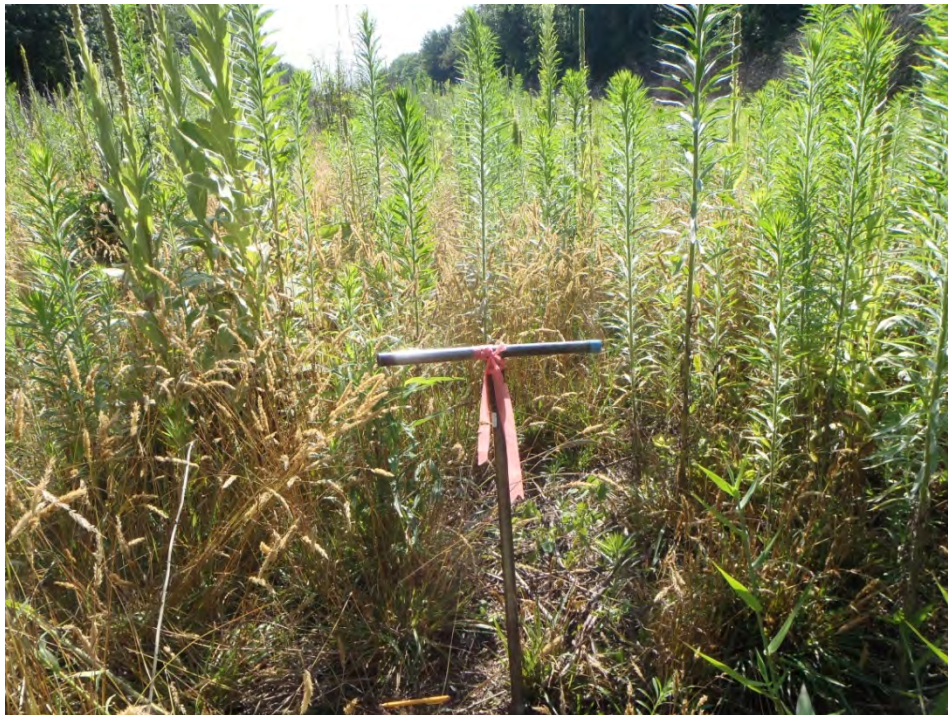
Photograph C-1: View of sample plot (SP)-14 in PEM wetland (W)-7, looking west (July 2012).



Photograph C-2: View of upland SP-15 adjacent to W-7, looking north (July 2012).



Photograph C-3: View of SP-16 in PEM W-7, looking east (July 2012).



Photograph C-4: View of upland SP-17 adjacent to W-7, looking east (July 2012).



Photograph C-5: View of SP-36 in upland, looking north (May 2013).



Photograph C-6: View of upland SP-37, looking north (May 2013).



Photograph C-7: View of SP-38 in upland, looking north (May 2013).



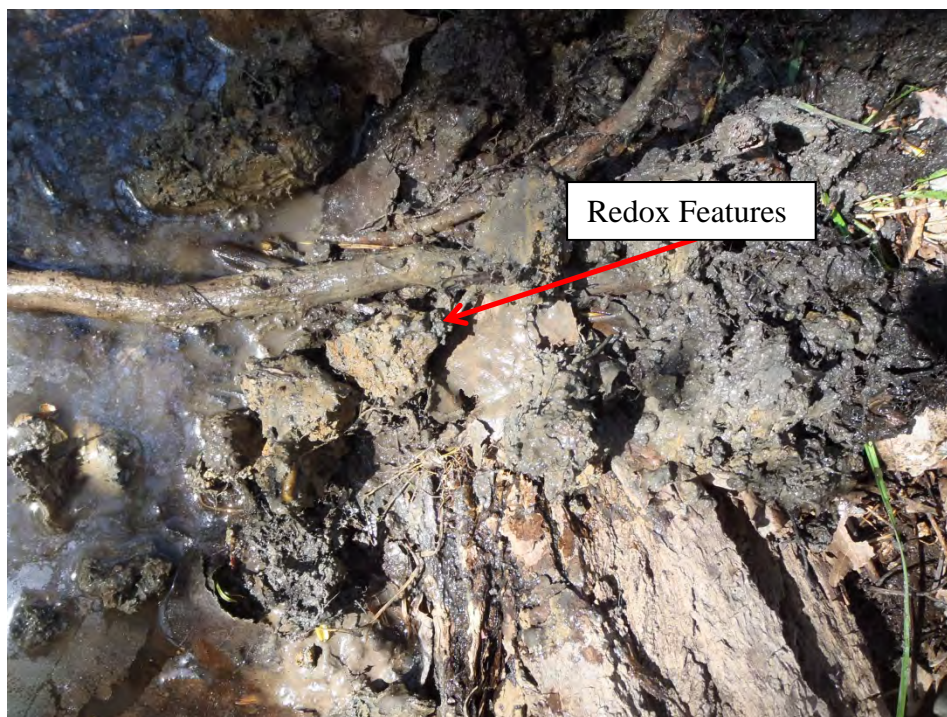
Photograph C-8: View of SP-39 in W-16, a PFO wetland, looking west (May 2013).



Photograph C-9: View of SP-40 in upland, looking east (May 2013).



Photograph C-10: View of SP-41 location in PFO wetland W-16, looking west (May 2013).



Photograph C-11: View of SP-41 soils in PFO wetland W-16 (May 2013).



Photograph C-12: View of upland SP-42, looking west (May 2013).



Photograph C-13: View of upland SP-43, looking west (May 2013).



Photograph C-14: View of SP-51 in upland, looking north (June 2013).



Photograph C-15: View of SP-52 in upland, looking north (June 2013).



Photograph C-16: View of SP-53 in upland, looking north (June 2013).



Photograph C-17: View of SP-54 in upland, looking north (June 2013).



Photograph C-18: View of SP-55 in W-21, a PFO wetland, looking northwest (June 2013).



Photograph C-19: View of SP-56 in upland, looking north (June 2013).



Photograph C-20: View of SP-57 in upland, looking north (June 2013).



Photograph C-21: View of SP-110 in upland, looking north (November 2014).



Photograph C-22: View of SP-111 in upland, looking north (November 2014).

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

3/6/2015 3:46:41 PM

in

Case No(s). 14-2162-EL-BSB

Summary: Application for Lake Avenue Substation (Part 6 of 11) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.