

AVON LAKE GAS ADDITION PROJECT

Wetland and Water Resources

Legend

- Above Ground Proposed Project Route
- Below Ground Proposed Project Route
- Permanent Right-of-Way
- Temporary Workspace
- Mile Post
- Wetland/Upland Field Collected Point

Wetland Type

- PEM - Palustrine Emergent
- PFO - Palustrine Forested
- PSS - Palustrine Scrub-Shrub
- Field Delineated Stream
- NWI Wetland
- Ohio Wetland Inventory
- Contour Line - 10 Ft
- Affected Parcels
- Hydric Soils
- River/Stream
- Lake
- County Boundary
- Political Township Boundary
- Municipal Boundary
- Railroad

- Roads
- Interstate
 - US Highway
 - State Highway

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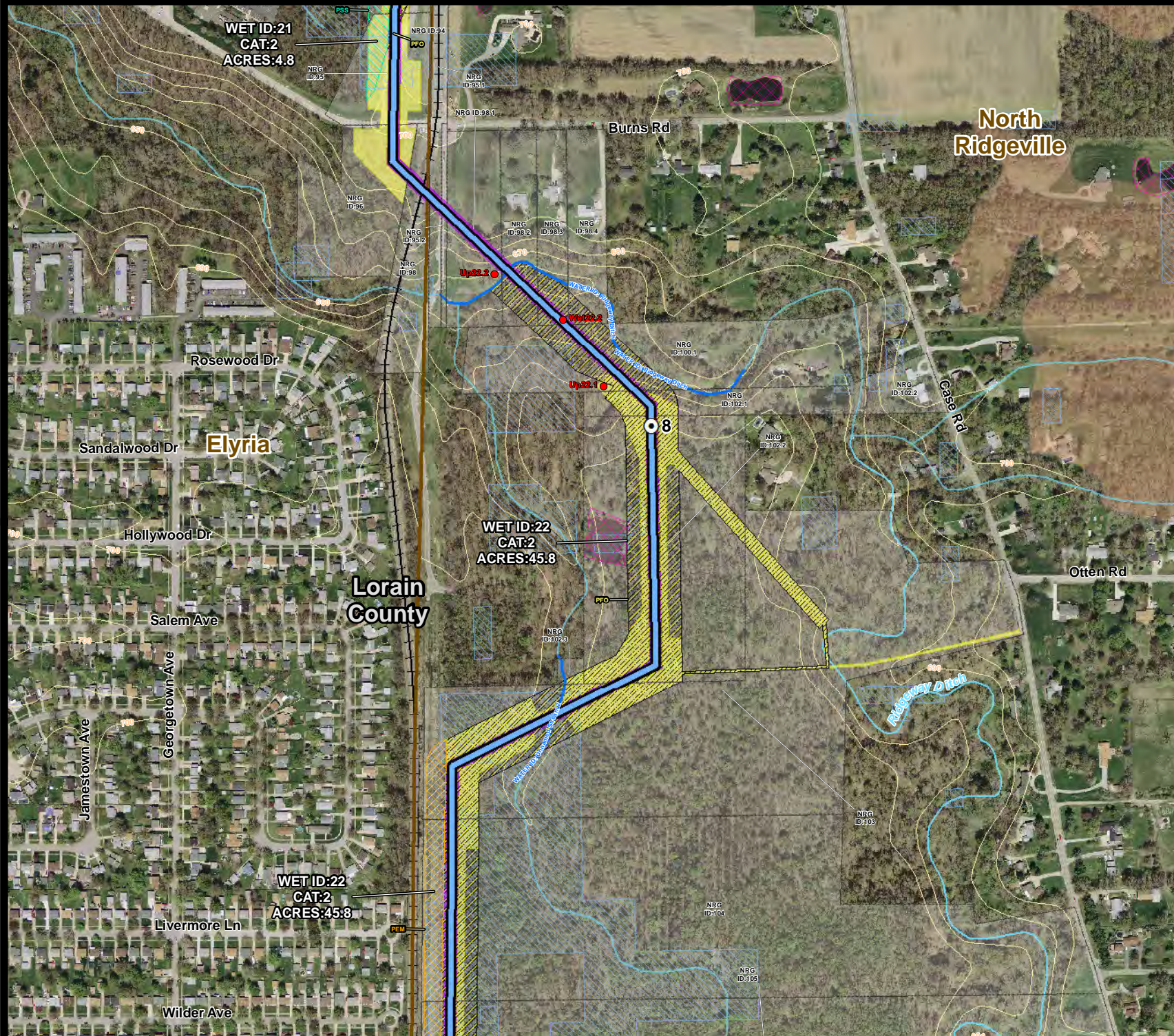
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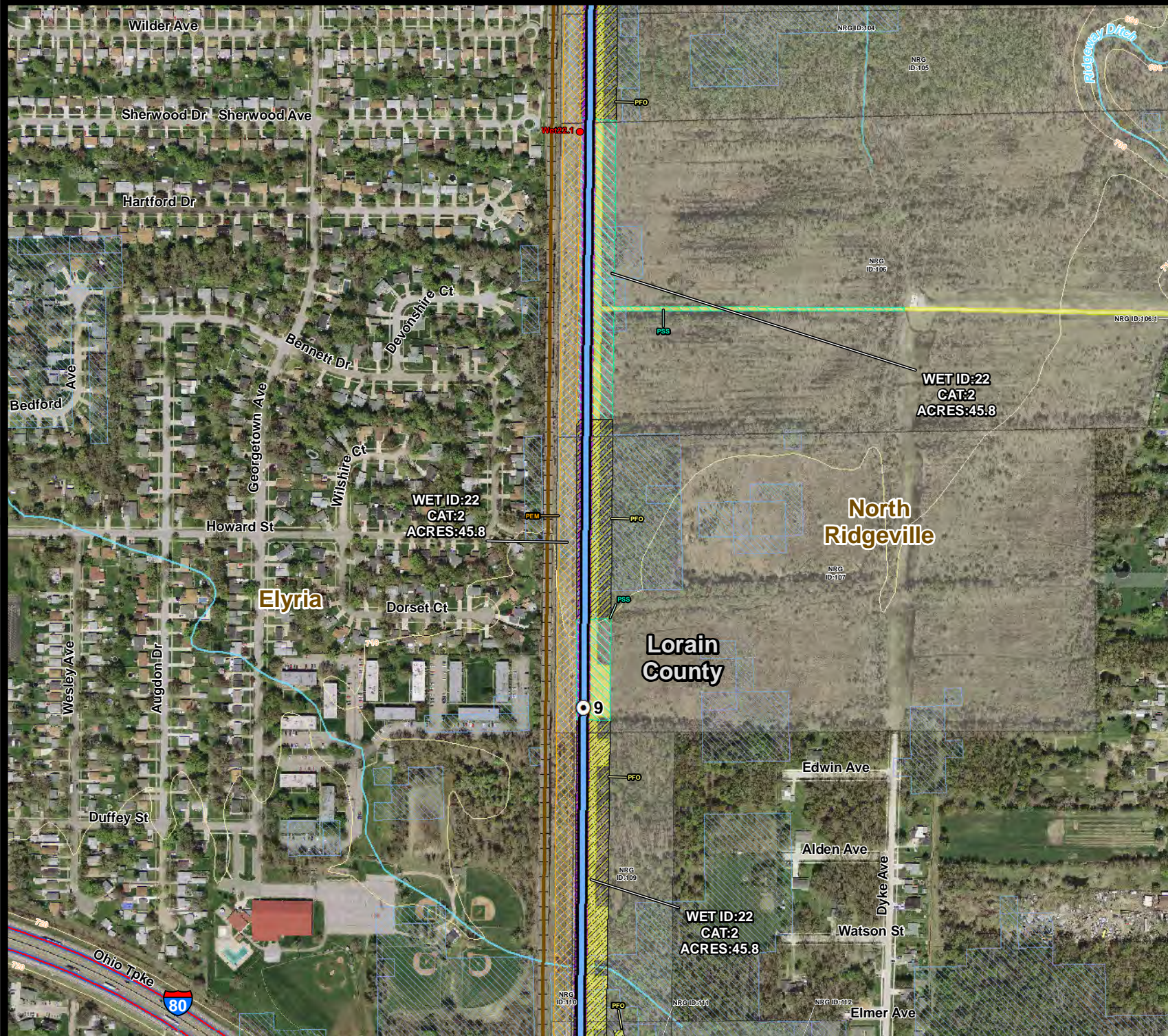
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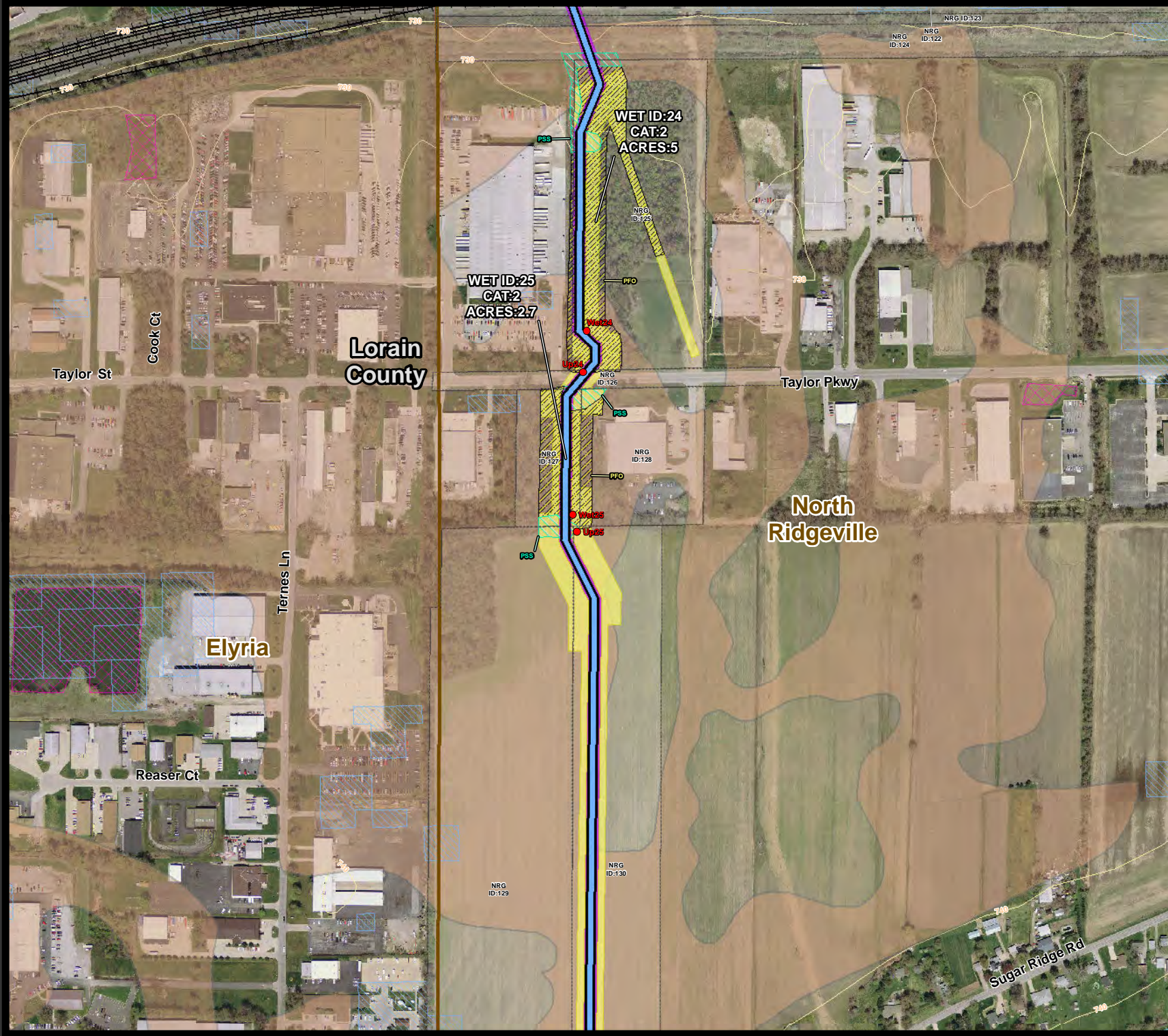
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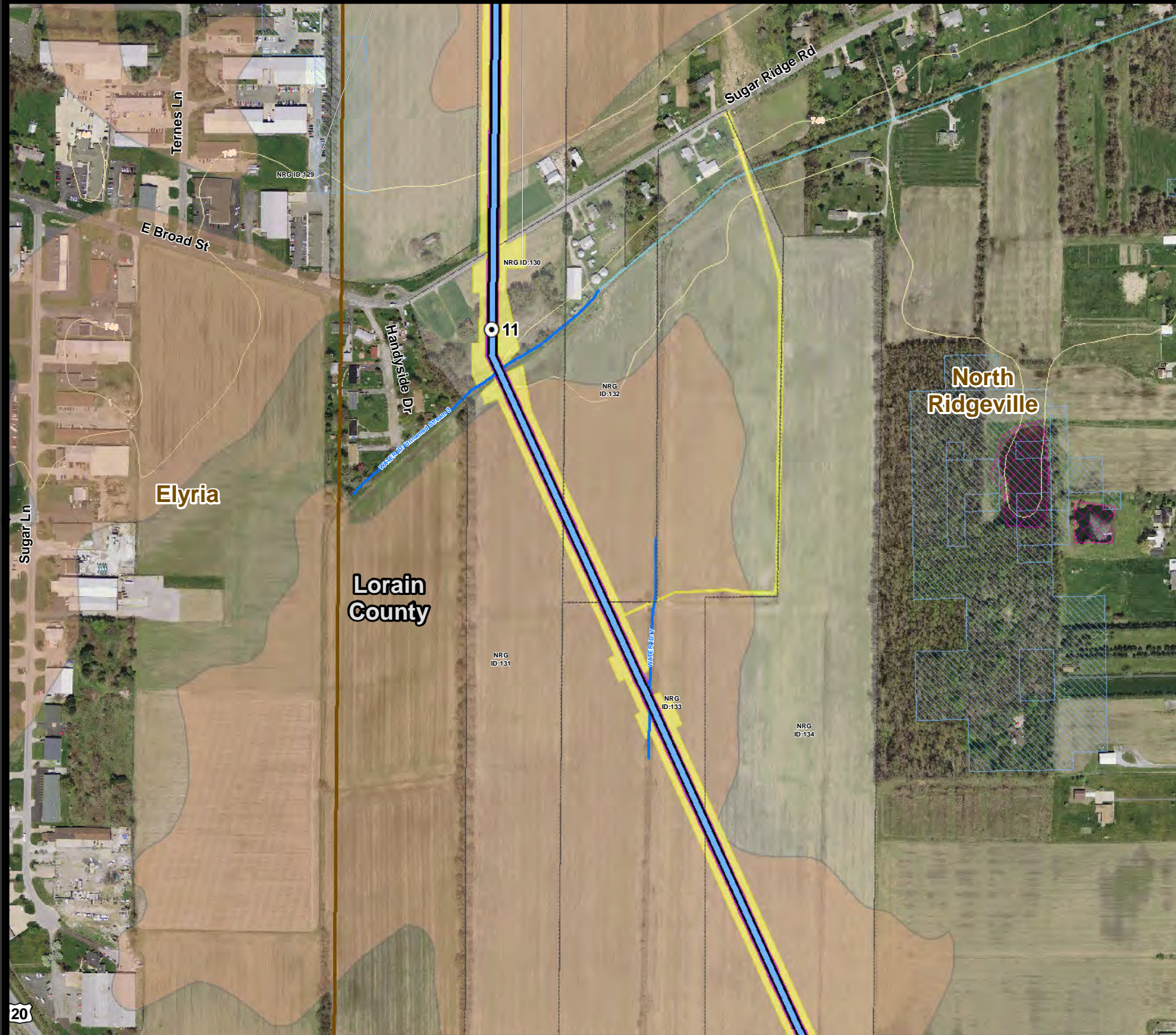
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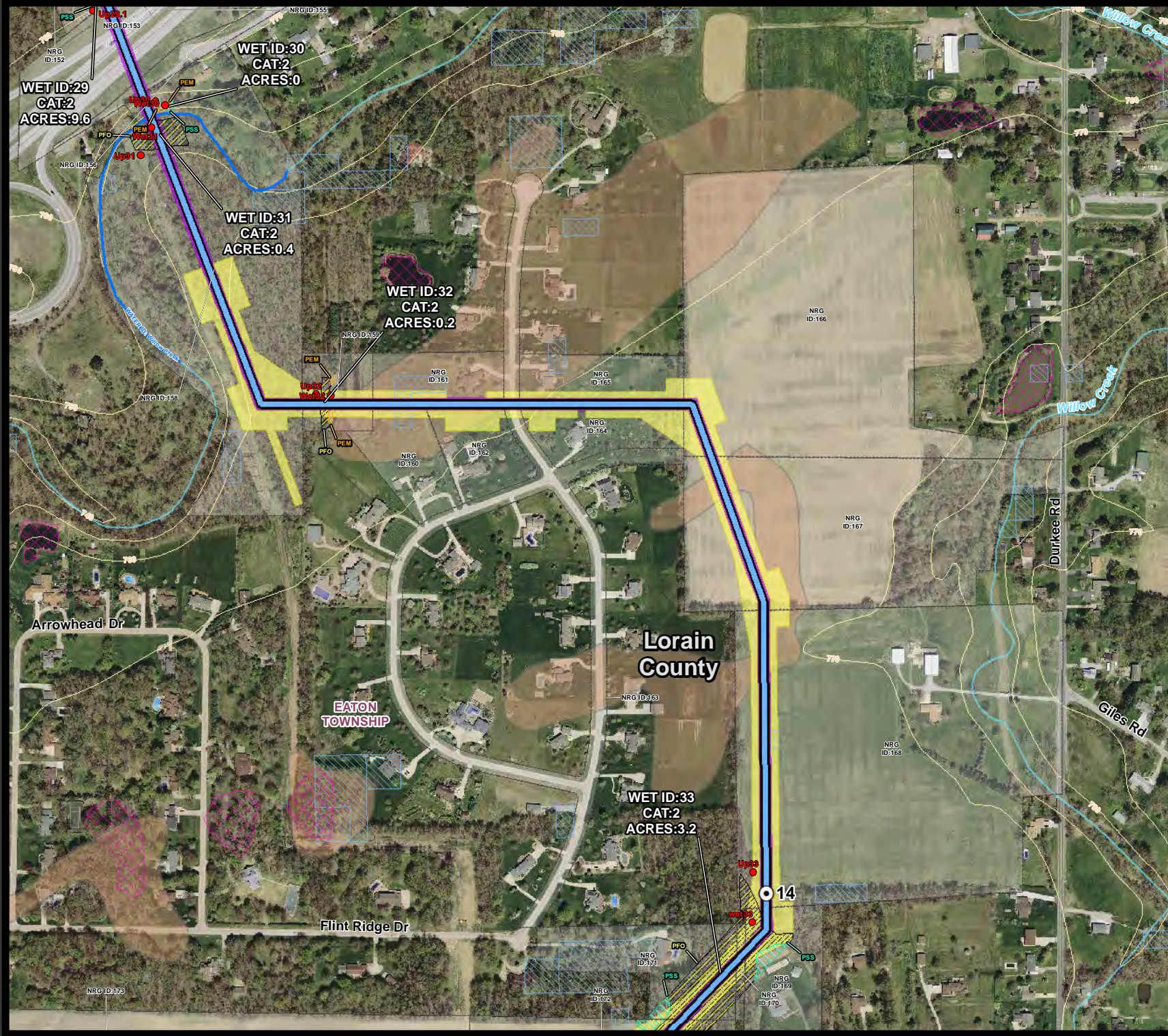
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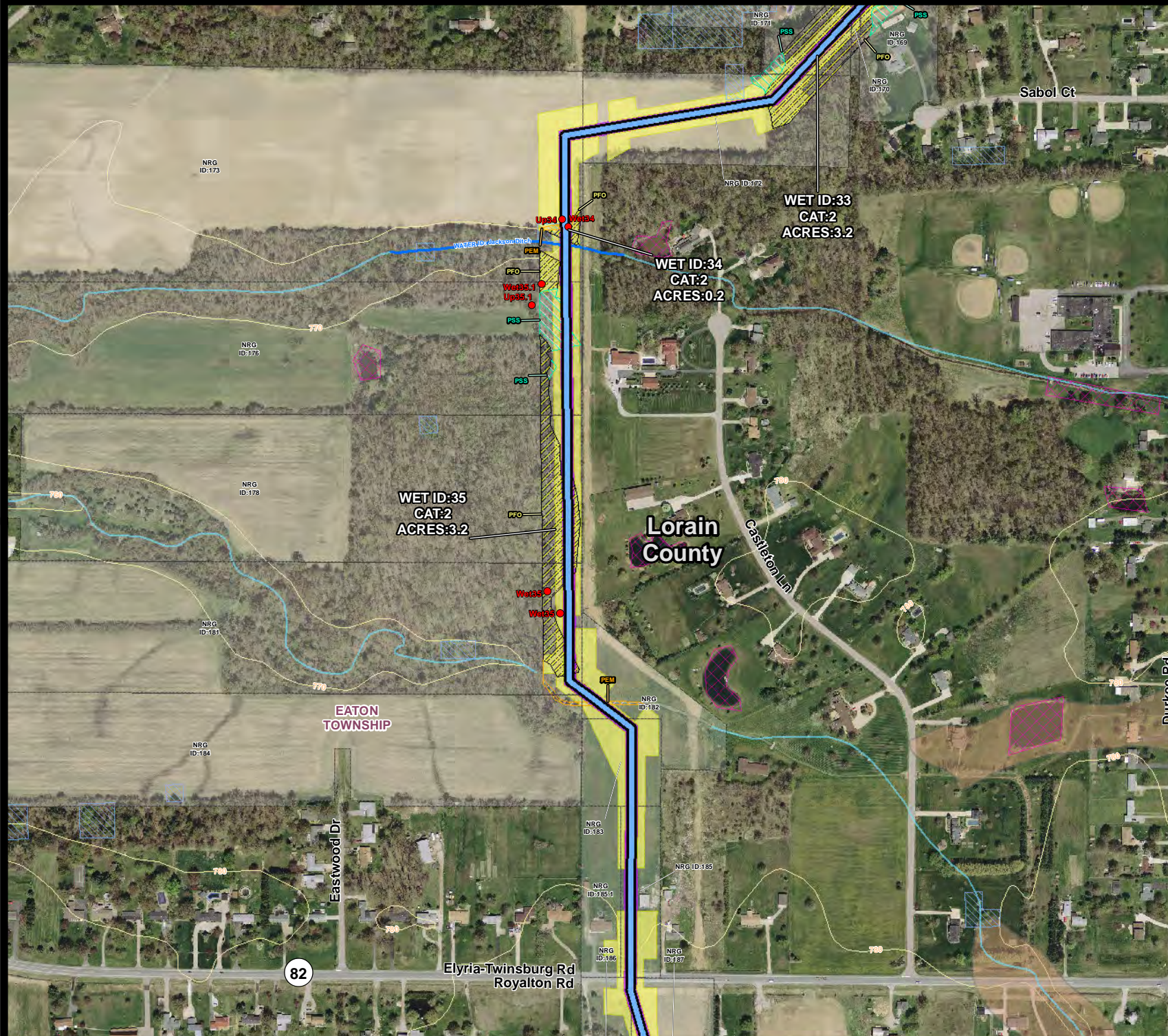
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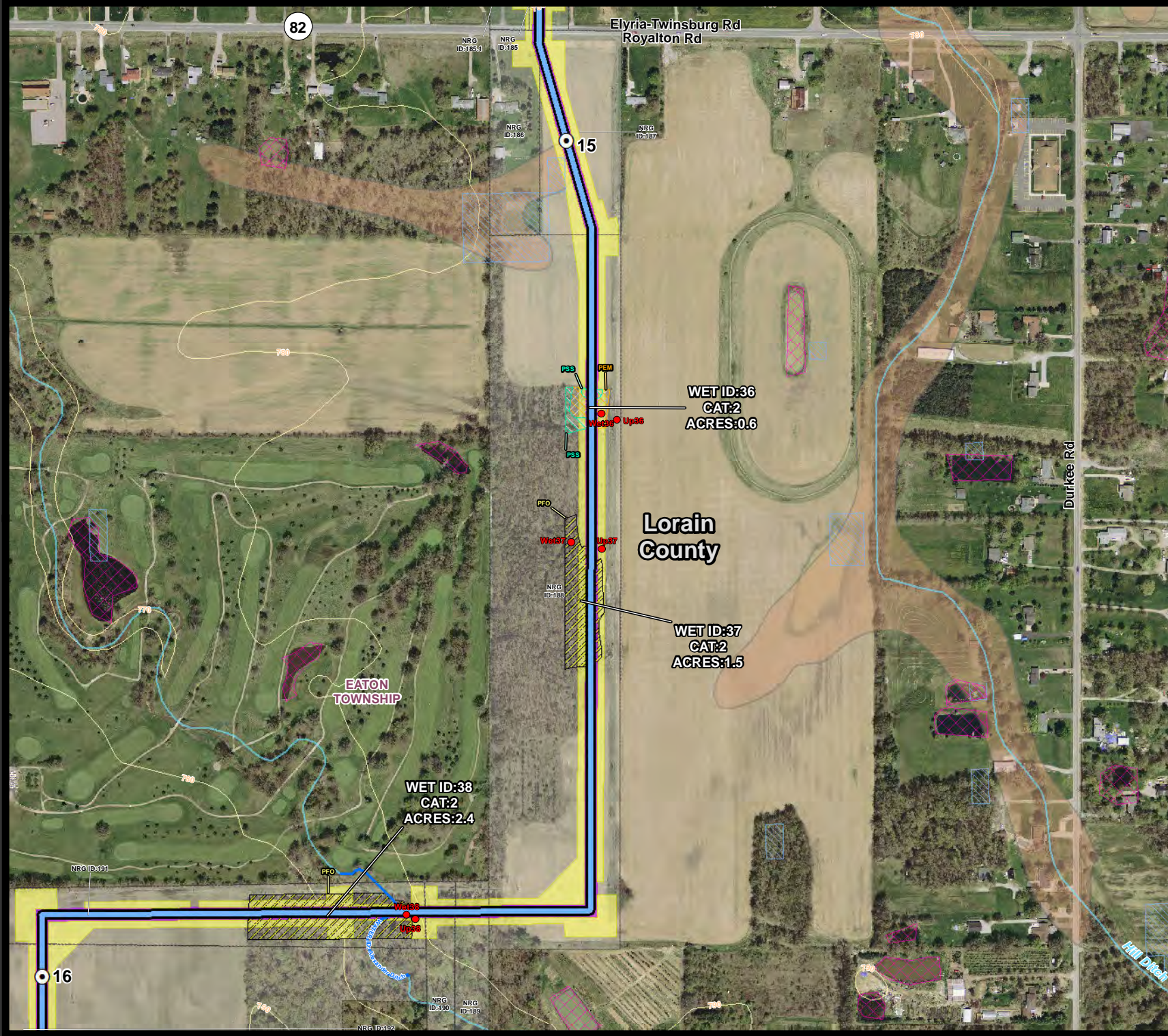
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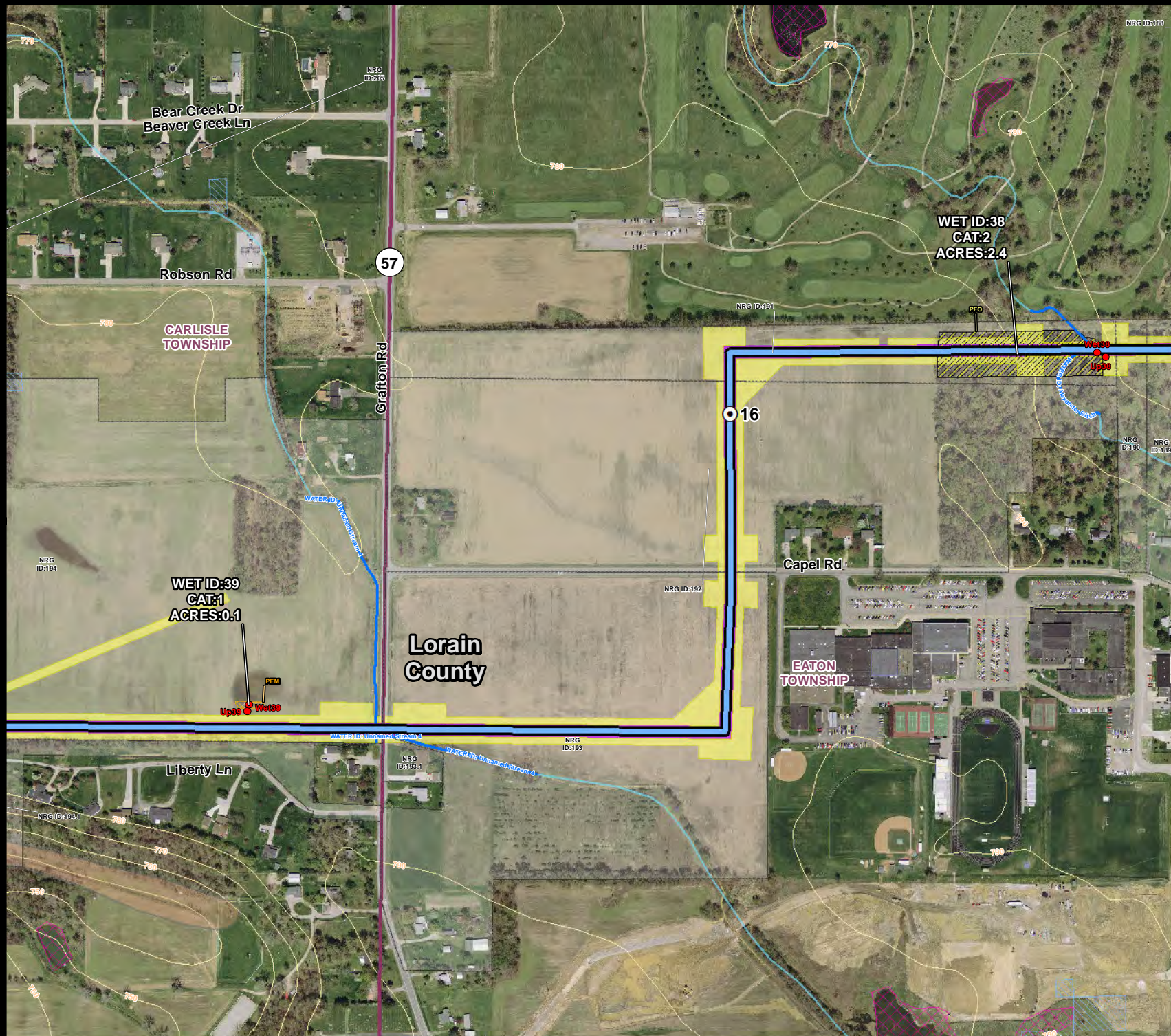
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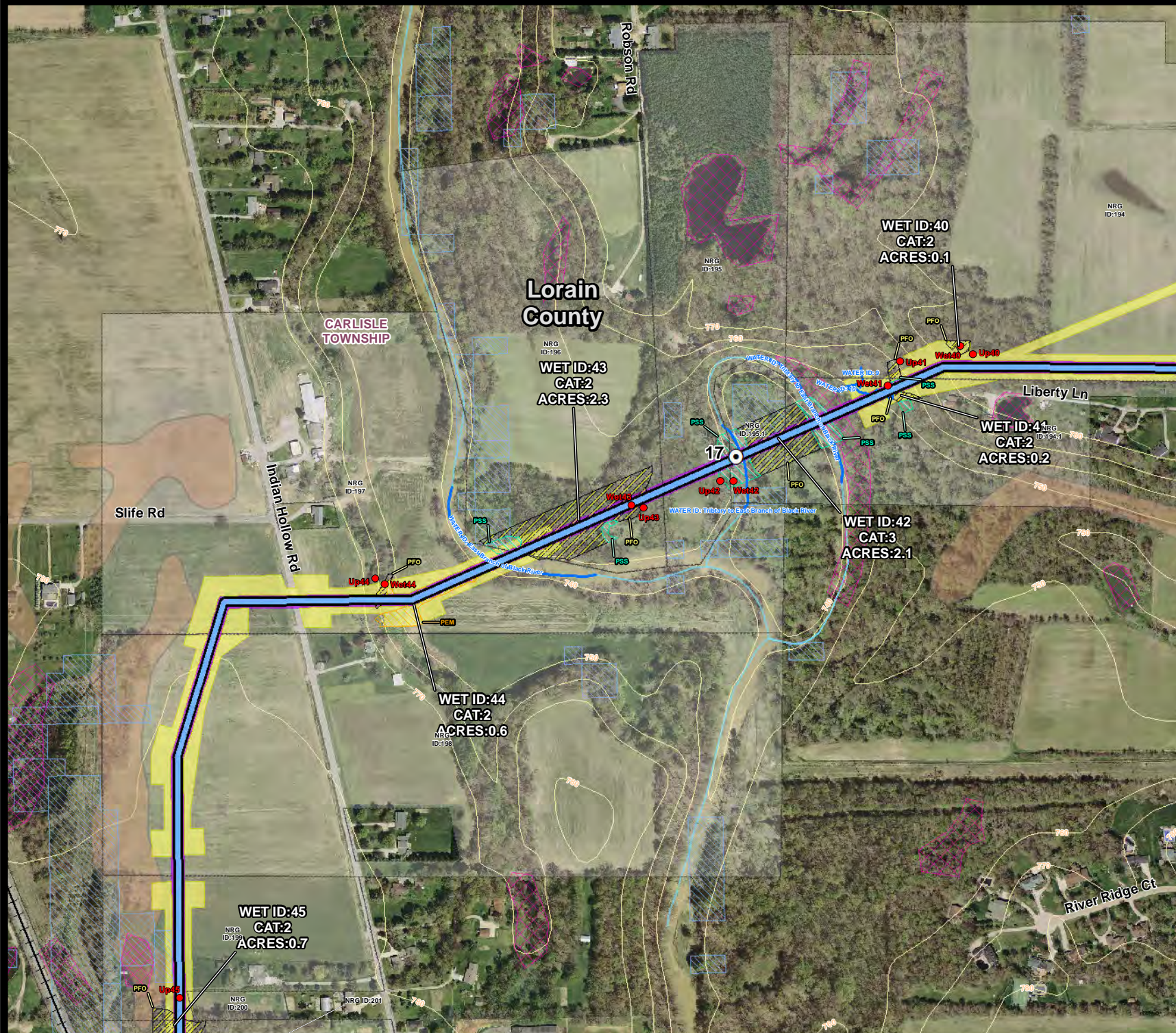
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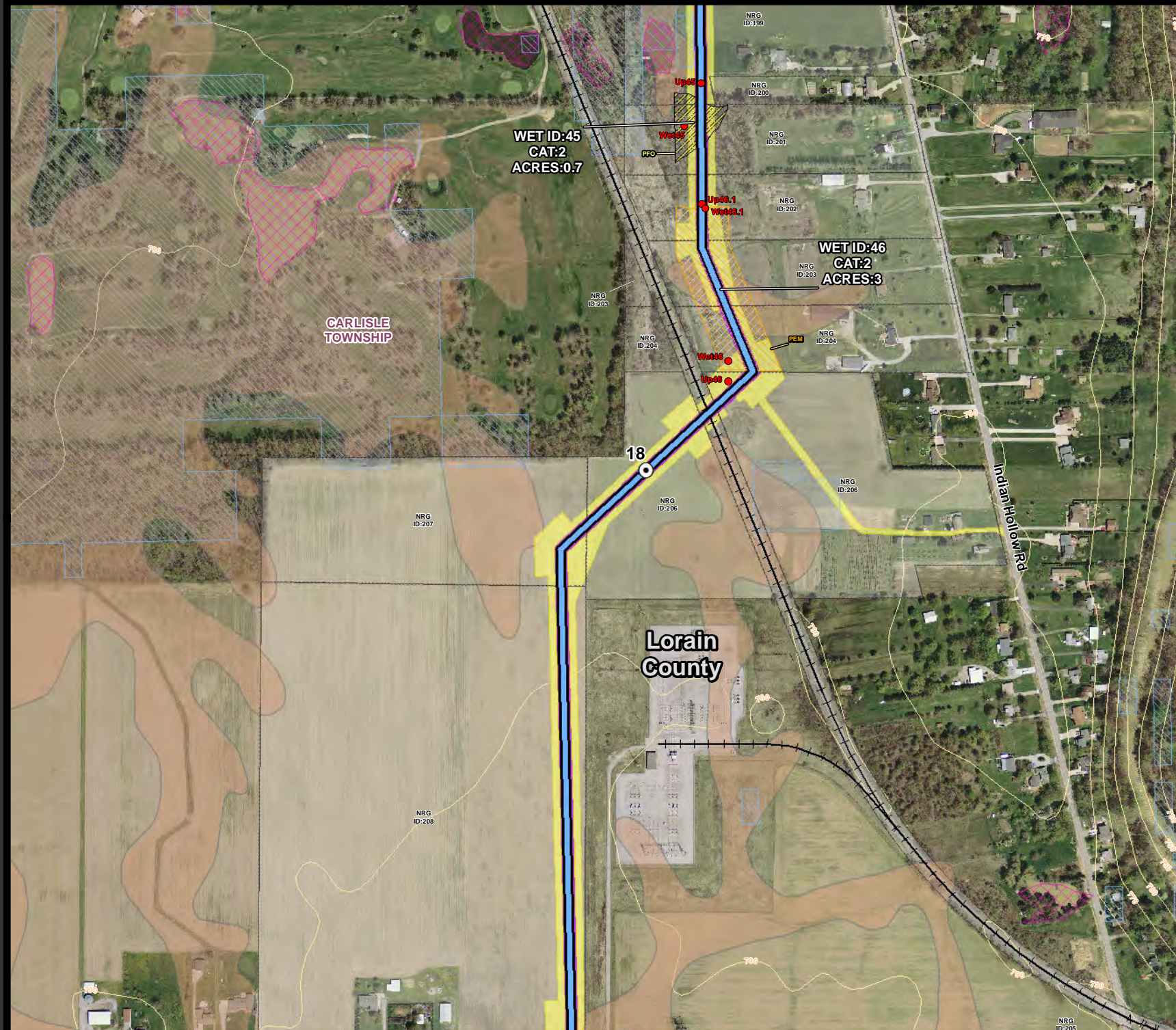
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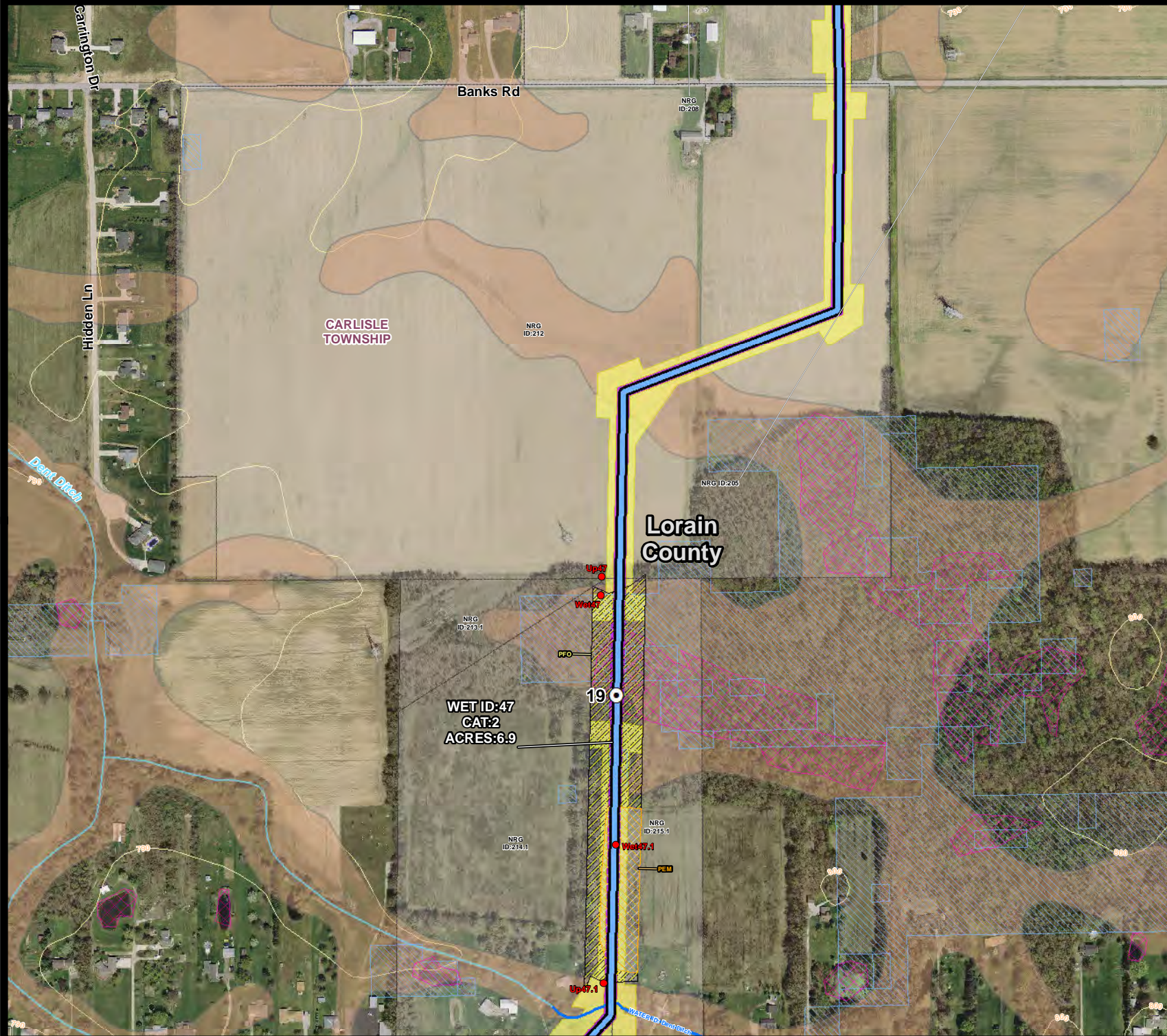
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CARLISLE
TOWNSHIP

Parsons Rd

NRG
ID:214.1

NRG
ID:215.1

Backum Run Road Culch

LAGRANGE
TOWNSHIP

NRG
ID:216.1

NRG
ID:216.2

Lorain
County

Wheeler Rd

Proposed Tap
Location

Up 48

PEM

Wet 48

NRG
ID:218.1

WET ID:48
CAT:1
ACRES:0.2

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Appendix B

USACE Routine Wetland Delineation Forms

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/16/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_1
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): Till plain/Lake Plain Local relief (concave, convex, none): Concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.499303088 Long: -82.0535475294 Datum: WGS 84
Soil Map Unit Name: Haskins silt loam, 0 to 2 percent slopes NWI classification: none
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.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	If yes, optional Wetland Site ID:	_____	
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

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"/> 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: 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: N/A					

Sampling Point: UPL_1

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Fraxinus pennsylvanica</i>	30	Yes	FACW
2.				
3.				
4.				
5.				
6.				
7.				
		30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Cornus racemosa</i>	5	Yes	FAC
2.				
3.				
4.				
5.				
6.				
7.				
		5	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Solidago canadensis</i>	40	Yes	FACU
2.	<i>Alliaria petiolata</i>	2	No	FACU
3.	<i>Glechoma hederacea</i>	5	No	FACU
4.	<i>Geranium maculatum</i>	20	Yes	FACU
5.	<i>Ambrosia artemisiifolia</i>	10	No	FACU
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		77	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.	<i>Toxicodendron radicans</i>	2	No	FAC
2.				
3.				
4.				
		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 0	x 1 = 0
FACW species 30	x 2 = 60
FAC species 7	x 3 = 21
FACU species 77	x 4 = 308
UPL species 0	x 5 = 0
Column Totals: 114 (A)	389 (B)
Prevalence Index = B/A = 3.41	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

SOIL

Sampling Point: UPL_1

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/16/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 1
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: T4N, R17W
 Landform (hillside, terrace, etc.): Till plain/Lake Plain Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.499317538 Long: -82.0537333419 Datum: WGS 84
 Soil Map Unit Name: Haskins loam, 0 to 2 percent slopes NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_1</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" 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 checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <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 checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </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>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

VEGETATION – Use scientific names of plants.

 Sampling Point: WET 1

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer saccharinum</u>	60	Yes	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>83.3%</u> (A/B)																
2. <u>Fraxinus pennsylvanica</u>	20	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>2</u></td> <td>x 1 = <u>2</u></td> </tr> <tr> <td>FACW species <u>90</u></td> <td>x 2 = <u>180</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</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>217</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.13</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>2</u>	x 1 = <u>2</u>	FACW species <u>90</u>	x 2 = <u>180</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>102</u> (A)	<u>217</u> (B)	Prevalence Index = B/A = <u>2.13</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>2</u>	x 1 = <u>2</u>																			
FACW species <u>90</u>	x 2 = <u>180</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>102</u> (A)	<u>217</u> (B)																			
Prevalence Index = B/A = <u>2.13</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Acer saccharinum</u>	5	Yes	FACW																	
2. <u>Fraxinus pennsylvanica</u>	5	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover																		
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Rosa palustris</u>	2	No	OBL	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>Parthenocissus quinquefolia</u>	5	Yes	FACU																	
3. <u>Carex blanda</u>	5	Yes	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	12	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15' radius</u>)																				
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
		=Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

 Remarks: (Include photo numbers here or on a separate sheet.)
 Predominantly bare ground/leaf litter

SOIL

Sampling Point: WET 1

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/16/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_2
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): Till plain/Lake Plain Local relief (concave, convex, none): Concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4941548323 Long: -82.0569044391 Datum: WGS 84
Soil Map Unit Name: Haskins silt loam, 0 to 2 percent slopes NWI classification: none
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.)

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>	If yes, optional Wetland Site ID:		
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

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"/> 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)	
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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: N/A			

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_2

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	FACW	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>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>113</u></td> <td>x 4 = <u>452</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>128</u></td> <td>(A) <u>507</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.96</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>10</u>	x 3 = <u>30</u>	FACU species <u>113</u>	x 4 = <u>452</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>128</u>	(A) <u>507</u> (B)	Prevalence Index = B/A = <u>3.96</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>10</u>	x 3 = <u>30</u>																			
FACU species <u>113</u>	x 4 = <u>452</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>128</u>	(A) <u>507</u> (B)																			
Prevalence Index = B/A = <u>3.96</u>																				
=Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Robinia pseudoacacia</u>	<u>20</u>	<u>Yes</u>	FACU																	
2. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	FAC																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Solidago canadensis</u>	<u>3</u>	<u>No</u>	FACU																	
2. <u>Rubus allegheniensis</u>	<u>60</u>	<u>Yes</u>	FACU																	
3. <u>Daucus carota</u>	<u>5</u>	<u>No</u>	UPL																	
4. <u>Festuca rubra</u>	<u>10</u>	<u>No</u>	FACU																	
5. <u>Vicia americana</u>	<u>10</u>	<u>No</u>	FACU																	
6. <u>Solidago canadensis</u>	<u>10</u>	<u>No</u>	FACU																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
Woody Vine Stratum (Plot size: <u>15'</u> radius)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

SOIL

Sampling Point: UPL_2

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/16/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 2
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Till plain/Lake Plain Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4941159071 Long: -82.0578302412 Datum: WGS 84
 Soil Map Unit Name: Mermill Loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_2</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

 Sampling Point: WET 2

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	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>11</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>72.7%</u> (A/B)																
2. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>50</u>	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>18</u></td> <td>x 4 = <u>72</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>138</u></td> <td>(A) <u>362</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.62</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>18</u>	x 4 = <u>72</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>138</u>	(A) <u>362</u> (B)	Prevalence Index = B/A = <u>2.62</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>10</u>	x 1 = <u>10</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>60</u>	x 3 = <u>180</u>																			
FACU species <u>18</u>	x 4 = <u>72</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>138</u>	(A) <u>362</u> (B)																			
Prevalence Index = B/A = <u>2.62</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Cornus racemosa</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>40</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Alliaria petiolata</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Juncus tenuis</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Rosa palustris</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
5. <u>Geranium maculatum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>28</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Vitis riparia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Toxicodendron radicans</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
	<u>20</u>	=Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

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

SOIL

Sampling Point: WET 2

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/16/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_3
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): Till plain Local relief (concave, convex, none): Concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.490738077 Long: -82.0592654809 Datum: WGS 84
Soil Map Unit Name: Mahoning silt loam, 0 to 2 percent slopes NWI classification: none
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.)

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> X </u>	No <u> </u>		If yes, optional Wetland Site ID: <u> </u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u> X </u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

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"/> 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 checked="" 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: N/A			

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_3

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	5	Yes	FACW	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>66.7%</u> (A/B)																
2. <u>Quercus palustris</u>	5	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: right;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td style="text-align: right;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td style="text-align: right;">x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td style="text-align: right;">x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td style="text-align: right;">x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td style="text-align: right;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>60</u></td> <td style="text-align: right;">(A) <u>175</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: right;">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>30</u>	x 2 = <u>60</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>60</u>	(A) <u>175</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>30</u>	x 2 = <u>60</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>25</u>	x 4 = <u>100</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>60</u>	(A) <u>175</u> (B)																			
Prevalence Index = B/A = <u>2.92</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Fraxinus pennsylvanica</u>	10	Yes	FACW																	
2. <u>Quercus palustris</u>	10	Yes	FACW																	
3. <u>Rubus allegheniensis</u>	5	No	FACU																	
4. <u>Cornus racemosa</u>	5	No	FAC																	
5. _____																				
6. _____																				
7. _____																				
	30	=Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Alliaria petiolata</u>	5	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>Glechoma hederacea</u>	15	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	20	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15'</u> radius)																				
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
		=Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

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

SOIL

Sampling Point: UPL_3

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/16/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 3
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Till plain/Lake Plain Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4908873274 Long: -82.0591358336 Datum: WGS 84
 Soil Map Unit Name: Mahoning silt loam, 0 to 2 percent slopes NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_3</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u> </u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>x</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u>x</u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: 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>14</u> Saturation Present? Yes <u>x</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

Sampling Point: WET 3

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Populus deltoides</i>	70	Yes	FAC
2.	<i>Fraxinus pennsylvanica</i>	10	No	FACW
3.				
4.				
5.				
6.				
7.				
		80	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Rubus allegheniensis</i>	5	Yes	FACU
2.	<i>Fraxinus pennsylvanica</i>	5	Yes	FACW
3.	<i>Acer rubrum</i>	5	Yes	FAC
4.	<i>Prunus virginiana</i>	5	Yes	FACU
5.				
6.				
7.				
		20	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
			=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	75	x 3 =	225
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	100 (A)		295 (B)
Prevalence Index = B/A =		2.95	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is $\leq 3.0^1$

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

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

No herbaceous layer - leaf litter and bare ground

SOIL

Sampling Point: WET 3

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/16/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_4
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4895381051 Long: -82.0586037508 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: none
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.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	If yes, optional Wetland Site ID:	_____	
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)					
<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: 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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: N/A					

Sampling Point: UPL_4

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Betula lenta</i>	10	Yes	FACW
2.				
3.				
4.				
5.				
6.				
7.				
		10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Fraxinus americana</i>	10	Yes	FACU
2.				
3.				
4.				
5.				
6.				
7.				
		10	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Alliaria petiolata</i>	5	No	FACU
2.	<i>Glechoma hederacea</i>	20	Yes	FACU
3.	<i>Rosa multiflora</i>	5	No	FACU
4.	<i>Malva neglecta</i>	10	Yes	UPL
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		40	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	40	x 4 = 160
UPL species	10	x 5 = 50
Column Totals:	60 (A)	230 (B)
Prevalence Index = B/A = 3.83		

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

SOIL

Sampling Point: UPL_4

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/16/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 4
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4896153967 Long: -82.0586135988 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: PUBGx

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> If yes, optional Wetland Site ID: <u>WET_4</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>x</u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>x</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>x</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u>x</u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>x</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </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>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

VEGETATION – Use scientific names of plants.

Sampling Point: WET 4

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	10	Yes	FACW	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>66.7%</u> (A/B)																
2. <u>Prunus virginiana</u>	10	Yes	FACU																	
3. <u>Crataegus spp.</u>	10	Yes	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	30	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">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>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</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>90</u></td> <td>(A) <u>235</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.61</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>90</u>	(A) <u>235</u> (B)	Prevalence Index = B/A = <u>2.61</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>55</u>	x 2 = <u>110</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>20</u>	x 4 = <u>80</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>90</u>	(A) <u>235</u> (B)																			
Prevalence Index = B/A = <u>2.61</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Lonicera tatarica</u>	5	Yes	FACU																	
2. <u>Fraxinus pennsylvanica</u>	5	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover		Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Phragmites australis</u>	40	Yes	FACW																	
2. <u>Glechoma hederacea</u>	5	No	FACU																	
3. <u>Ranunculus acris</u>	5	No	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	50	=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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
Woody Vine Stratum (Plot size: <u>15'</u> radius)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
		=Total Cover																		

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

SOIL

Sampling Point: WET 4

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/15/14
 Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_5
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Till Plains Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4895381051 Long: -82.0586037508 Datum: WGS 84
 Soil Map Unit Name: Mahoning silt loam, 0 to 2 percent slopes NWI classification: none

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 x 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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut and stripped/filled for adjacent rail yard		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>x</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u> </u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: 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>4</u> Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Water table appears to be perched on top of fill layer.		

VEGETATION – Use scientific names of plants.

Sampling Point: UPL_5

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>107</u></td> <td>x 4 = <u>428</u></td> </tr> <tr> <td>UPL species <u>2</u></td> <td>x 5 = <u>10</u></td> </tr> <tr> <td>Column Totals: <u>109</u> (A)</td> <td><u>438</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.02</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>0</u>	x 3 = <u>0</u>	FACU species <u>107</u>	x 4 = <u>428</u>	UPL species <u>2</u>	x 5 = <u>10</u>	Column Totals: <u>109</u> (A)	<u>438</u> (B)	Prevalence Index = B/A = <u>4.02</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>0</u>	x 3 = <u>0</u>																			
FACU species <u>107</u>	x 4 = <u>428</u>																			
UPL species <u>2</u>	x 5 = <u>10</u>																			
Column Totals: <u>109</u> (A)	<u>438</u> (B)																			
Prevalence Index = B/A = <u>4.02</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Vicia americana</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Asclepias syriaca</u>	<u>2</u>	<u>No</u>	<u>UPL</u>																	
4. <u>Poa pratensis</u>	<u>95</u>	<u>Yes</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>109</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
 All but herbaceous layer has been previously clear-cut for railway use.

SOIL

Sampling Point: UPL_5

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 5
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Till Plains Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4896153967 Long: -82.0586135988 Datum: WGS 84
 Soil Map Unit Name: Mahoning silt loam, 0 to 2 percent slopes 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 x, Soil x, or Hydrology x 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WET_5</u>
Hydric Soil Present?	Yes <u>x</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut and stripped/filled for adjacent rail yard			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>x</u> Surface Water (A1) _____ Water-Stained Leaves (B9) <u>x</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>x</u> Saturation (A3) _____ Marl Deposits (B15) _____ 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) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <u>x</u> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No _____ Depth (inches): <u>0</u> Water Table Present? Yes <u>x</u> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <u>x</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May. Water table appears to be perched on top of fill layer.		

VEGETATION – Use scientific names of plants.

Sampling Point: WET 5

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	FAC																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>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>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>100</u></td> <td>(A) <u>310</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.10</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u>	(A) <u>310</u> (B)	Prevalence Index = B/A = <u>3.10</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>20</u>	x 1 = <u>20</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
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UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u>	(A) <u>310</u> (B)																			
Prevalence Index = B/A = <u>3.10</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Festuca rubra</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Juncus tenuis</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Juncus effusus</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
 All but herbaceous layer has been previously clear-cut for railway use.

SOIL

Sampling Point: WET 5

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/15/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_6
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): none Slope (%): 0-2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4793534527 Long: -82.0600936787 Datum: WGS 84
Soil Map Unit Name: Miner silt loam NWI classification: none

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 x 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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut and stripped/filled for adjacent rail yard	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: UPL_6

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</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>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.00</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>0</u>	x 3 = <u>0</u>																			
FACU species <u>100</u>	x 4 = <u>400</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Vicia americana</u>	<u>90</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Poa pratensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Fragaria virginiana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

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

All but herbaceous layer has been previously clear-cut and regularly mowed for railyard use.

SOIL

Sampling Point: UPL_6

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/15/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_6.1
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): None Slope (%): 0-2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4824755787 Long: -82.0577146506 Datum: WGS 84
Soil Map Unit Name: Lorain silty clay loam NWI classification: none
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.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	If yes, optional Wetland Site ID:	_____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: (Explain alternative procedures here or in a separate report.)					

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)					
<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"/> 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: 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="12"/> 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: N/A					

Sampling Point: UPL_6.1

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>	10	Yes	FACW
2.	<i>Betula lenta</i>	25	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		35	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Acer rubrum</i>	10	Yes	FAC
2.	<i>Lonicera tatarica</i>	5	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		15	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Alliaria petiolata</i>	55	Yes	FACU
2.	<i>Geranium maculatum</i>	5	No	FACU
3.	<i>Prunella vulgaris</i>	2	No	FAC
4.	<i>Rubus allegheniensis</i>	5	No	FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		67	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 10	x 2 = 20
FAC species 12	x 3 = 36
FACU species 95	x 4 = 380
UPL species 0	x 5 = 0
Column Totals: 117 (A)	436 (B)
Prevalence Index = B/A = 3.73	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

SOIL

Sampling Point: UPL_6.1

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 6
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.47950844 Long: -82.0597412163 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_6</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009			

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

 Sampling Point: WET 6

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>103</u></td> <td>x 2 = <u>206</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>103</u></td> <td>(A) <u>206</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>103</u>	x 2 = <u>206</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>103</u>	(A) <u>206</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>103</u>	x 2 = <u>206</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>103</u>	(A) <u>206</u> (B)																			
Prevalence Index = B/A = <u>2.00</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Fraxinus nigra</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Phragmites australis</u>	<u>95</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Onoclea sensibilis</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) Previously clear-cut area between 2007 and 2009																				

SOIL

Sampling Point: WET 6

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP 7
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.47269967 Long: -82.06369165 Datum: WGS 84
 Soil Map Unit Name: Lorain silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009			

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

 Sampling Point: UP 7

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>440</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.40</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>0</u>	x 3 = <u>0</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>100</u>	(A) <u>440</u> (B)	Prevalence Index = B/A = <u>4.40</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>0</u>	x 3 = <u>0</u>																			
FACU species <u>60</u>	x 4 = <u>240</u>																			
UPL species <u>40</u>	x 5 = <u>200</u>																			
Column Totals: <u>100</u>	(A) <u>440</u> (B)																			
Prevalence Index = B/A = <u>4.40</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Trifolium pratense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Plantago lanceolata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Cirsium arvense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Daucus carota</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
5. <u>Leucanthemum vulgare</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				

 Remarks: (Include photo numbers here or on a separate sheet.)
 Previously clear-cut area between 2007 and 2009

SOIL

Sampling Point: UP 7

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP 7.1
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.47177761 Long: -82.0638303574 Datum: WGS 84
Soil Map Unit Name: Lorain silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP 7.1

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>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>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>410</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.10</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>10</u>	x 3 = <u>30</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>100</u> (A)	<u>410</u> (B)	Prevalence Index = B/A = <u>4.10</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>																			
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UPL species <u>20</u>	x 5 = <u>100</u>																			
Column Totals: <u>100</u> (A)	<u>410</u> (B)																			
Prevalence Index = B/A = <u>4.10</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Trifolium pratense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Plantago lanceolata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Cirsium arvense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Daucus carota</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
5. <u>Leucanthemum vulgare</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
6. <u>Festuca rubra</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
7. <u>Prunella vulgaris</u>	<u>10</u>	<u>No</u>	<u>FAC</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
100 =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
 Plot was located along actively farmed field with planted grass.

SOIL

Sampling Point: UP 7.1

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET7
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.47201495 Long: -82.0635079205 Datum: WGS 84
 Soil Map Unit Name: Lorain silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_7</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" 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 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

VEGETATION – Use scientific names of plants.

 Sampling Point: WET7

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer rubrum</u>	45	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>	40	Yes	FACW																	
3. <u>Quercus macrocarpa</u>	15	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	100	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>125</u></td> <td>x 3 = <u>375</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>300</u> (A)</td> <td><u>705</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.35</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>125</u>	x 3 = <u>375</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>300</u> (A)	<u>705</u> (B)	Prevalence Index = B/A = <u>2.35</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>70</u>	x 1 = <u>70</u>																			
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Column Totals: <u>300</u> (A)	<u>705</u> (B)																			
Prevalence Index = B/A = <u>2.35</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Cornus sericea</u>	40	Yes	FACW																	
2. <u>Acer rubrum</u>	30	Yes	FAC																	
3. <u>Rosa palustris</u>	30	Yes	OBL																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	100	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Ranunculus acris</u>	25	Yes	FAC	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>Persicaria hydropiper</u>	25	Yes	OBL																	
3. <u>Juncus tenuis</u>	25	Yes	FAC																	
4. <u>Juncus effusus</u>	15	No	OBL																	
5. <u>Parthenocissus quinquefolia</u>	10	No	FACU																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	100	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
_____ =Total Cover																				

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

SOIL

Sampling Point: WET7

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP 8
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.45575797 Long: -82.06541246 Datum: WGS 84
Soil Map Unit Name: Lorain silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: UP 8

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</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>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.00</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>0</u>	x 3 = <u>0</u>																			
FACU species <u>100</u>	x 4 = <u>400</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Festuca rubra</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Plantago lanceolata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Lotus corniculatus</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
Previously clear-cut area between 2007 and 2009

SOIL

Sampling Point: UP 8

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 8
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.45581648 Long: -82.06553256 Datum: WGS 84
 Soil Map Unit Name: Lorain silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_8</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" 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 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 checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.5</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

Sampling Point: WET 8

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		=Total Cover		
Herb Stratum (Plot size: 5' radius)				
1.	<i>Phragmites australis</i>	20	Yes	FACW
2.	<i>Juncus effusus</i>	20	Yes	OBL
3.	<i>Typha latifolia</i>	20	Yes	OBL
4.	<i>Phalaris arundinacea</i>	20	Yes	FACW
5.	<i>Juncus tenuis</i>	20	Yes	FAC
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
		=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: 5 (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 40	x 1 = 40
FACW species 40	x 2 = 80
FAC species 20	x 3 = 60
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 100 (A)	180 (B)
Prevalence Index = B/A = 1.80	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

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

Previously clear-cut area between 2007 and 2009

SOIL

Sampling Point: WET 8

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP 8.1
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.45911575 Long: -82.06461914 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>x</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>x</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u>x</u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.5</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

VEGETATION – Use scientific names of plants.

 Sampling Point: UP 8.1

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</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>115</u> (A)</td> <td><u>460</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</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>0</u>	x 3 = <u>0</u>	FACU species <u>115</u>	x 4 = <u>460</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>460</u> (B)	Prevalence Index = B/A = <u>4.00</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>0</u>	x 3 = <u>0</u>																			
FACU species <u>115</u>	x 4 = <u>460</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>115</u> (A)	<u>460</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Quercus macrocarpa</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>15</u> =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Festuca rubra</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Lotus corniculatus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

 Remarks: (Include photo numbers here or on a separate sheet.)
 Previously clear-cut area between 2007 and 2009

SOIL

Sampling Point: UP 8.1

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/15/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET 8.1
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon, Jeff Williams Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.45911575 Long: -82.06461914 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_8.1</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Previously clear-cut area between 2007 and 2009			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" 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 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 checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent spring rains; normal for May		

VEGETATION – Use scientific names of plants.

Sampling Point: WET 8.1

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>103</u></td> <td>x 2 = <u>206</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>123</u> (A)</td> <td><u>251</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.04</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>103</u>	x 2 = <u>206</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>123</u> (A)	<u>251</u> (B)	Prevalence Index = B/A = <u>2.04</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>10</u>	x 1 = <u>10</u>																			
FACW species <u>103</u>	x 2 = <u>206</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>123</u> (A)	<u>251</u> (B)																			
Prevalence Index = B/A = <u>2.04</u>																				
=Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Salix nigra</u>	10	Yes	OBL																	
2. <u>Crataegus douglasii</u>	5	Yes	FAC																	
3. <u>Rubus arcticus</u>	5	Yes	FACW																	
4. <u>Juniperus communis</u>	5	Yes	FACU																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
25 =Total Cover																				
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Phragmites australis</u>	95	Yes	FACW																	
2. <u>Onoclea sensibilis</u>	3	No	FACW																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
98 =Total Cover																				
Woody Vine Stratum (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Previously clear-cut area between 2007 and 2009

SOIL

Sampling Point: WET 8.1

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/14/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_9
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4500220956 Long: -82.0668603432 Datum: WGS 84
Soil Map Unit Name: Miners silty loam NWI classification: none

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

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
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"/> 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: 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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: N/A					

VEGETATION – Use scientific names of plants.

Sampling Point: UPL_9

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
			=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
			=Total Cover																	
			=Total Cover																	
			=Total Cover																	
			=Total Cover																	
			=Total Cover																	
			=Total Cover																	
			=Total Cover	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. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
			=Total Cover																	
			=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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
			=Total Cover																	
			=Total Cover	Hydrophytic Vegetation Present? Yes _____ No _____																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
			=Total Cover																	

Remarks: (Include photo numbers here or on a separate sheet.)
only corn in agriculture field

SOIL

Sampling Point: UPL_9

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_9
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.45006274 Long: -82.0670318029 Datum: WGS 84
 Soil Map Unit Name: Miner silty loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_9</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PSS/PEM wetland		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>16</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>16</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_9

Remarks: (Include photo numbers here or on a separate sheet.)
Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_9

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 3/1	100					Mucky Loam/Clay	
10-20	10YR 5/1	98	10YR 5/8	2	C	M	Mucky Loam/Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>	Polyvalue Below Surface (S8) (LRR R,	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)								
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>	MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)								
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>	Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)								
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>	High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)								
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)								
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)								
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)								
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)								
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/>	Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)								
<input type="checkbox"/> Dark Surface (S7)											

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 _____
Remarks: 			

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/14/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_10
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4470523863 Long: -82.0669460513 Datum: WGS 84
Soil Map Unit Name: Miners silty loam NWI classification: none
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.)

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>	If yes, optional Wetland Site ID:		
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

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"/> 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)	
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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: N/A			

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_10

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>70</u></td> <td>x 3 = <u>210</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>200</u> (A)</td> <td><u>750</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.75</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>70</u>	x 3 = <u>210</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>200</u> (A)	<u>750</u> (B)	Prevalence Index = B/A = <u>3.75</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>70</u>	x 3 = <u>210</u>																			
FACU species <u>110</u>	x 4 = <u>440</u>																			
UPL species <u>20</u>	x 5 = <u>100</u>																			
Column Totals: <u>200</u> (A)	<u>750</u> (B)																			
Prevalence Index = B/A = <u>3.75</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Acer rubrum</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Quercus rubra</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>Dactylis glomerata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Trifolium pratense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Plantago rugelii</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Taraxacum officinale</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
5. <u>Daucus carota</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

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

SOIL

Sampling Point: UPL_10

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_10
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4469030241 Long: -82.0669241169 Datum: WGS 84
 Soil Map Unit Name: Miner silty loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_10</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>16</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>16</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_10

Tree Stratum (Plot size: 30' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Ulmus americana</i>			50	Yes	FACW
2.	<i>Acer rubrum</i>			30	Yes	FAC
3.	<i>Fraxinus pennsylvanica</i>			20	Yes	FACW
4.						
5.						
6.						
7.						
				100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Ulmus americana</i>			50	Yes	FACW
2.	<i>Fraxinus pennsylvanica</i>			30	Yes	FACW
3.	<i>Acer rubrum</i>			20	Yes	FAC
4.						
5.						
6.						
7.						
				100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Hydrophyllum virginianum</i>			50	Yes	FAC
2.	<i>Trillium cernuum</i>			10	No	FAC
3.	<i>Enemion biternatum</i>			10	No	FAC
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
				70	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.						
2.						
3.						
4.						
					=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (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 0	x 1 = 0
FACW species 150	x 2 = 300
FAC species 120	x 3 = 360
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 270 (A)	660 (B)
Prevalence Index = B/A = 2.44	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

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

Very heavy leaf litter limited herbaceous stratum growth.

SOIL

Sampling Point: WET_10

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP_11
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.44444769 Long: -82.0666250192 Datum: WGS 84
Soil Map Unit Name: Mahoning silt loam, 0 to 2 percent slopes NWI classification: Not available
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.)

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>		If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>			
Remarks: (Explain alternative procedures here or in a separate report.) Upland adjacent to PEM wetland					

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"/> 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: 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 type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Site was seasonably wet due to recent heavy spring rains					

VEGETATION – Use scientific names of plants.

 Sampling Point: UP_11

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	30	Yes		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>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	30	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <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>0</u></td> <td>x 2 = <u>0</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>30</u></td> <td>(A) <u>120</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</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>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>30</u>	(A) <u>120</u> (B)	Prevalence Index = B/A = <u>4.00</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>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>30</u>	(A) <u>120</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
		=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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)					Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>															
1. <u>Taraxacum officinale</u>	10	Yes	FACU																	
2. <u>Plantago lanceolata</u>	10	Yes	FACU																	
3. <u>Festuca rubra</u>	10	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
		=Total Cover		Woody Vine Stratum (Plot size: <u>15' radius</u>) 1. _____ 2. _____ 3. _____ 4. _____ _____ =Total Cover																
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	30	=Total Cover																		

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

Ground surface is disturbed from recent excavation. Therefore, areas of exposed soils exist within plot.

SOIL

Sampling Point: UP_11

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_11
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.444399663 Long: -82.0667985597 Datum: WGS 84
 Soil Map Unit Name: Miner silty loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_11</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PEM wetland			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.1</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>7</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

VEGETATION – Use scientific names of plants.

Sampling Point: WET_11

	Absolute % Cover	Dominant Species?	Indicator Status																																									
Tree Stratum (Plot size: <u>30'</u> radius)																																												
1. <u>Acer rubrum</u>	30	Yes	FAC	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)																																								
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
	30	=Total Cover																																										
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																																												
1. _____				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;">100</td> <td>x 1 =</td> <td style="text-align: center;">100</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">0</td> <td>x 2 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">30</td> <td>x 3 =</td> <td style="text-align: center;">90</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td>x 4 =</td> <td style="text-align: center;">0</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;">130</td> <td>(A)</td> <td style="text-align: center;">190</td> <td>(B)</td> </tr> <tr> <td colspan="5" style="text-align: center;">Prevalence Index = B/A = <u>1.46</u></td> </tr> </table>	Total % Cover of:		Multiply by:			OBL species	100	x 1 =	100		FACW species	0	x 2 =	0		FAC species	30	x 3 =	90		FACU species	0	x 4 =	0		UPL species	0	x 5 =	0		Column Totals:	130	(A)	190	(B)	Prevalence Index = B/A = <u>1.46</u>				
Total % Cover of:		Multiply by:																																										
OBL species	100	x 1 =	100																																									
FACW species	0	x 2 =	0																																									
FAC species	30	x 3 =	90																																									
FACU species	0	x 4 =	0																																									
UPL species	0	x 5 =	0																																									
Column Totals:	130	(A)	190	(B)																																								
Prevalence Index = B/A = <u>1.46</u>																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
		=Total Cover																																										
Herb Stratum (Plot size: <u>5'</u> radius)																																												
1. <u>Carex emoryi</u>	80	Yes	OBL	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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 effusus</u>	10	No	OBL																																									
3. <u>Scirpus cyperinus</u>	10	No	OBL																																									
4. _____																																												
5. _____																																												
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10. _____																																												
11. _____																																												
12. _____																																												
	100	=Total Cover																																										
Woody Vine Stratum (Plot size: <u>15'</u> radius)																																												
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																																								
2. _____																																												
3. _____																																												
4. _____																																												
		=Total Cover																																										

Remarks: (Include photo numbers here or on a separate sheet.)
 Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_11

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/14/14
 Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_12
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.440098505 Long: -82.0667782429 Datum: WGS 84
 Soil Map Unit Name: Miners silty loam NWI classification: none

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) 		

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: UPL_12

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>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>90</u></td> <td>x 4 = <u>360</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>420</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.82</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>20</u>	x 3 = <u>60</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>420</u> (B)	Prevalence Index = B/A = <u>3.82</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>																			
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Column Totals: <u>110</u> (A)	<u>420</u> (B)																			
Prevalence Index = B/A = <u>3.82</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	<u>20</u>	<u>Yes</u>	_____																	
2. _____	<u>20</u>	<u>Yes</u>	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>Dactylis glomerata</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Ranunculus hispidus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
1. <u>Vitis riparia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
 very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_12

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_12
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4398931008 Long: -82.0668589548 Datum: WGS 84
Soil Map Unit Name: Miner silty loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_12</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature, primarily.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>5</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_12

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>	30	Yes	FAC
2.				
3.				
4.				
5.				
6.				
7.				
		30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Acer rubrum</i>	50	Yes	FAC
2.	<i>Ulmus americana</i>	50	Yes	FACW
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Carex emoryi</i>	60	Yes	OBL
2.	<i>Anemone canadensis</i>	10	No	FACW
3.	<i>Toxicodendron radicans</i>	10	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		80	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=Total Cover	

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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	60	x 2 =	120
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	210	(A)	450 (B)
Prevalence Index = B/A =		2.14	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_12

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
 Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_13
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): floodplains Local relief (concave, convex, none): _____ Slope (%): 0 - 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4266117344 Long: -82.0670705344 Datum: WGS 84
 Soil Map Unit Name: Holly silt loam NWI classification: none

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> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ 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) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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: N/A		

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_13

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>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>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>150</u> (A)</td> <td><u>570</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.80</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>120</u>	x 4 = <u>480</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>570</u> (B)	Prevalence Index = B/A = <u>3.80</u>	
Total % Cover of:	Multiply by:																			
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FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>120</u>	x 4 = <u>480</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>570</u> (B)																			
Prevalence Index = B/A = <u>3.80</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Prunus serotina</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Acer negundo</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Poa pratensis</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Alliaria petiolata</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Rosa multiflora</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Arctium minus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Vitis riparia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				
=Total Cover				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

 Remarks: (Include photo numbers here or on a separate sheet.)
 very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_13

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_13
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): floodplains Local relief (concave, convex, none): _____ Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4354736375 Long: -82.0673968104 Datum: WGS 84
 Soil Map Unit Name: Holly silt loam NWI classification: Not available

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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WET_13</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: (Explain alternative procedures here or in a separate report.) PEM wetland feature within existing utility ROW			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ 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) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

VEGETATION – Use scientific names of plants.

 Sampling Point: WET_13

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</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>120</u> (A)</td> <td><u>310</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.58</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>60</u>	x 3 = <u>180</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>310</u> (B)	Prevalence Index = B/A = <u>2.58</u>	
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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>310</u> (B)																			
Prevalence Index = B/A = <u>2.58</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Rubus multiflorus</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>Typha angustifolia</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Solidago gigantea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Rosa palustris</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
4. <u>Anemone canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
5. <u>Alliaria petiolata</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
6. <u>Cirsium arvense</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
7. <u>Toxicodendron radicans</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

 Remarks: (Include photo numbers here or on a separate sheet.)
 Very heavy leaf litter limited herbaceous stratum growth.

SOIL

Sampling Point: WET_13

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
 Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_14
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): floodplains Local relief (concave, convex, none): _____ Slope (%): 0 - 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4266117344 Long: -82.0670705344 Datum: WGS 84
 Soil Map Unit Name: Holly silt loam NWI classification: none

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> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ 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) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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: N/A		

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_14

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <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>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>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>150</u> (A)</td> <td><u>570</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.80</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>120</u>	x 4 = <u>480</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>570</u> (B)	Prevalence Index = B/A = <u>3.80</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
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Column Totals: <u>150</u> (A)	<u>570</u> (B)																			
Prevalence Index = B/A = <u>3.80</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Prunus serotina</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Acer negundo</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>40</u> =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Poa pratensis</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Rosa multiflora</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Arctium minus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. <u>Vitis riparia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
<u>10</u> =Total Cover																				

 Remarks: (Include photo numbers here or on a separate sheet.)
 very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_14

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_14
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): floodplains Local relief (concave, convex, none): _____ Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4264980851 Long: -82.0670262728 Datum: WGS 84
 Soil Map Unit Name: Holly silt loam NWI classification: Not available

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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WET_14</u>
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" 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 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>5</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_14

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Ulmus americana</i>	30	Yes	FACW
2.	<i>Carpinus caroliniana</i>	30	Yes	FAC
3.	<i>Acer rubrum</i>	30	Yes	FAC
4.	<i>Carya cordiformis</i>	10	No	FAC
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Ulmus americana</i>	50	Yes	FACW
2.	<i>Carpinus caroliniana</i>	10	No	FAC
3.	<i>Carya cordiformis</i>	10	No	FAC
4.				
5.				
6.				
7.				
		70	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Poa trivialis</i>	30	Yes	FAC
2.	<i>Acer rubrum</i>	20	Yes	FAC
3.	<i>Rosa multiflora</i>	10	No	FACU
4.	<i>Enemion biternatum</i>	10	No	FAC
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		70	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (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 0	x 1 = 0
FACW species 80	x 2 = 160
FAC species 150	x 3 = 450
FACU species 10	x 4 = 40
UPL species 0	x 5 = 0
Column Totals: 240 (A)	650 (B)
Prevalence Index = B/A = 2.71	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

US Army Corps of Engineers

SOIL

Sampling Point: WET_14

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_15
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): lakeplains, tillplains Local relief (concave, convex, none): backslopes Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4249639951 Long: -82.0675396935 Datum: WGS 84
Soil Map Unit Name: Haskins loam NWI classification: none
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.)

Hydrophytic Vegetation Present?	Yes _____	No <u> X </u>	Is the Sampled Area within a Wetland? Yes _____ No <u> X </u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u> X </u>	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)					
<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: 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: N/A					

Sampling Point: UPL_15

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>	50	Yes	FACU
2.	<i>Acer saccharum</i>	50	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Acer rubrum</i>	50	Yes	FAC
2.	<i>Ulmus rubra</i>	30	Yes	FAC
3.	<i>Prunus serotina</i>	20	Yes	FACU
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Carex pensylvanica</i>	20	Yes	FACU
2.	<i>Geranium maculatum</i>	10	Yes	FACU
3.	<i>Plantago rugelii</i>	10	Yes	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		40	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 90	x 3 = 270
FACU species 150	x 4 = 600
UPL species 0	x 5 = 0
Column Totals: 240 (A)	870 (B)
Prevalence Index = B/A = 3.63	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_15

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_15
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): tillplains, lakeplains Local relief (concave, convex, none): backslope Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4242850773 Long: -82.0673322504 Datum: WGS 84
 Soil Map Unit Name: Haskins loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_15</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_15

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1.	Acer rubrum	100	Yes FAC
2.			
3.			
4.			
5.			
6.			
7.			
	100 =Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.	Acer rubrum	100	Yes FAC
2.			
3.			
4.			
5.			
6.			
7.			
	100 =Total Cover		
Herb Stratum (Plot size: 5' radius)			
1.	Acer rubrum	40	Yes FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 =Total Cover		
Woody Vine Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
	=Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) Very heavy leaf litter limited herbaceous stratum growth.			

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 0	x 1 =	0	
FACW species 0	x 2 =	0	
FAC species 240	x 3 =	720	
FACU species 0	x 4 =	0	
UPL species 0	x 5 =	0	
Column Totals: 240 (A)		720 (B)	
Prevalence Index = B/A = 3.00			
Hydrophytic Vegetation Indicators:			
___ 1 - Rapid Test for Hydrophytic Vegetation			
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%			
<input checked="" type="checkbox"/> 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.			
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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.			
Hydrophytic Vegetation Present? Yes ___X___ No _____			

SOIL

Sampling Point: WET_15

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP_16
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.42210716 Long: -82.06738212 Datum: WGS 84
Soil Map Unit Name: Holly silt loam NWI classification: Not available

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

HYDROLOGY

Northcentral and Northeast Region – Version 2.0

Sampling Point: UP_16

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer saccharum</i>	30	Yes	FACU
2.	<i>Acer rubrum</i>	30	Yes	FAC
3.	<i>Quercus macrocarpa</i>	30	Yes	FACU
4.				
5.				
6.				
7.				
		90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Cornus sericea</i>	30	Yes	FACW
2.	<i>Ulmus americana</i>	30	Yes	FACW
3.	<i>Acer saccharum</i>	40	Yes	FACU
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Podophyllum peltatum</i>	60	Yes	FACU
2.	<i>Anemone canadensis</i>	15	No	FACW
3.	<i>Enemion biternatum</i>	15	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		90	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 75	x 2 = 150
FAC species 45	x 3 = 135
FACU species 160	x 4 = 640
UPL species 0	x 5 = 0
Column Totals: 280 (A)	925 (B)
Prevalence Index = B/A = 3.30	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
Very heavy leaf litter limited herbaceous stratum growth.

SOIL

Sampling Point: UP_16

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_16
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.42198362 Long: -82.06738133 Datum: WGS 84
 Soil Map Unit Name: Mahoning silt loam, 0 to 2 percent slopes NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_16</u>
Remarks: (Explain alternative procedures here or in a separate report.) PFO/PSS wetland feature	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u>X</u> Surface Water (A1) <u>X</u> High Water Table (A2) <u>X</u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 45%;"> <u>x</u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks) </div> </div>	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.5</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site was seasonably wet due to recent heavy spring rains	

Sampling Point: WET_16

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>	50	Yes	FAC
2.	<i>Ulmus americana</i>	50	Yes	FACW
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Cornus sericea</i>	50	Yes	FACW
2.	<i>Ulmus americana</i>	25	Yes	FACW
3.	<i>Acer rubrum</i>	25	Yes	FAC
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Arisaema triphyllum</i>	20	Yes	FAC
2.	<i>Anemone canadensis</i>	15	Yes	FACW
3.	<i>Enemion biternatum</i>	15	Yes	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		50	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (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 0	x 1 = 0
FACW species 140	x 2 = 280
FAC species 110	x 3 = 330
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 250 (A)	610 (B)
Prevalence Index = B/A = 2.44	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
Very heavy leaf litter limited herbaceous stratum growth.

SOIL

Sampling Point: WET_16

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_17
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4152022053 Long: -82.0682596092 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: none
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.)

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>	If yes, optional Wetland Site ID:		
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)					
<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: 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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: N/A					

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_17

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Prunus serotina</u>	50	Yes	FACU	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>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u>Acer saccharum</u>	20	Yes	FACU																	
3. <u>Quercus rubra</u>	20	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	90	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">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>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>230</u></td> <td>x 4 = <u>920</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>250</u></td> <td>(A) <u>1000</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</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>10</u>	x 3 = <u>30</u>	FACU species <u>230</u>	x 4 = <u>920</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>250</u>	(A) <u>1000</u> (B)	Prevalence Index = B/A = <u>4.00</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>10</u>	x 3 = <u>30</u>																			
FACU species <u>230</u>	x 4 = <u>920</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>250</u>	(A) <u>1000</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Prunus serotina</u>	30	Yes	FACU																	
2. <u>Quercus rubra</u>	30	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	60	=Total Cover																		
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Festuca rubra</u>	40	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>	30	Yes	FACU																	
3. <u>Daucus carota</u>	10	No	UPL																	
4. <u>Taraxacum officinale</u>	10	No	FACU																	
5. <u>Toxicodendron radicans</u>	10	No	FAC																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	100	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15' radius</u>)																				
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

 Remarks: (Include photo numbers here or on a separate sheet.)
 very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_17

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_17
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.414900215 Long: -82.0684155028 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_17</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_17

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>	50	Yes	FAC
2.	<i>Ulmus americana</i>	50	Yes	FACW
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Acer rubrum</i>	50	Yes	FAC
2.	<i>Ulmus americana</i>	50	Yes	FACW
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Arisaema triphyllum</i>	15	Yes	FAC
2.	<i>Anemone canadensis</i>	15	Yes	FACW
3.	<i>Enemion biternatum</i>	15	Yes	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		45	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (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	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	130	x 3 = 390
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	245 (A)	620 (B)
Prevalence Index = B/A = 2.53		

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_17

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_19_18
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4095025921 Long: -82.0683496339 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: none
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.)

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>		If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

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"/> 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)	
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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: N/A			

Sampling Point: UPL_19,18

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer saccharum</i>	50	Yes	FACU
2.	<i>Acer rubrum</i>	50	Yes	FAC
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Rubus allegheniensis</i>	30	Yes	FACU
2.	<i>Prunus serotina</i>	30	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		60	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Festuca rubra</i>	40	Yes	FACU
2.	<i>Poa pratensis</i>	30	Yes	FACU
3.	<i>Viola sororia</i>	10	No	FAC
4.	<i>Taraxacum officinale</i>	10	No	FACU
5.	<i>Trifolium arvense</i>	10	No	UPL
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 60	x 3 = 180
FACU species 190	x 4 = 760
UPL species 10	x 5 = 50
Column Totals: 260 (A)	990 (B)
Prevalence Index = B/A = 3.81	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_19,18

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_18
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4136676829 Long: -82.0684204053 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_18</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

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

Sampling Point: WET_18

<u>Tree Stratum</u>	(Plot size:	<u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Acer rubrum</u>		70	Yes	FAC
2.	<u>Ulmus americana</u>		30	Yes	FACW
3.					
4.					
5.					
6.					
7.					
			100 =Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)					
1.	<u>Acer rubrum</u>		80	Yes	FAC
2.	<u>Ulmus americana</u>		20	Yes	FACW
3.					
4.					
5.					
6.					
7.					
			100 =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)					
1.	<u>Arisaema triphyllum</u>		30	Yes	FAC
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
			30 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)					
1.	<u>Toxicodendron radicans</u>		20	Yes	FAC
2.					
3.					
4.					
			20 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>50</u>	x 2 = <u>100</u>
FAC species <u>200</u>	x 3 = <u>600</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>250</u> (A)	<u>700</u> (B)
Prevalence Index = B/A = <u>2.80</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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_18

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_19
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4122337847 Long: -82.0683894488 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_19</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>x</u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </u> Depth (inches): <u>0.1</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>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

VEGETATION – Use scientific names of plants.

Sampling Point: WET_19

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30' radius</u>)																				
1. <u>Acer rubrum</u>	70	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>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Ulmus americana</u>	30	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	100	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <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>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>190</u></td> <td>x 3 = <u>570</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>220</u></td> <td>(A) <u>630</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.86</u></td> </tr> </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>190</u>	x 3 = <u>570</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>220</u>	(A) <u>630</u> (B)	Prevalence Index = B/A = <u>2.86</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>190</u>	x 3 = <u>570</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>220</u>	(A) <u>630</u> (B)																			
Prevalence Index = B/A = <u>2.86</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. <u>Acer rubrum</u>	80	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover																		
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Carex blanda</u>	20	Yes	FAC	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>	10	Yes	FAC																	
3. <u>Toxicodendron radicans</u>	10	Yes	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	40	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15' radius</u>)																				
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
	=Total Cover			Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

Remarks: (Include photo numbers here or on a separate sheet.)
 Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_19

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: UP_20
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0 to 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4111532 Long: -82.06879122 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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>		If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>			
Remarks: (Explain alternative procedures here or in a separate report.) Upland adjacent to PFO/PSS wetland feature					

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"/> 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: 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 type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Site was seasonably wet due to recent heavy spring rains					

Sampling Point: UP_20

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer saccharum</i>	60	Yes	FACU
2.	<i>Acer rubrum</i>	30	Yes	FAC
3.	<i>Quercus macrocarpa</i>	10	No	FACU
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Prunus serotina</i>	40	Yes	FACU
2.	<i>Rubus allegheniensis</i>	40	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		80	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Festuca rubra</i>	50	Yes	FAC
2.	<i>Taraxacum officinale</i>	10	No	FACU
3.	<i>Toxicodendron radicans</i>	10	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		70	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 90	x 3 = 270
FACU species 160	x 4 = 640
UPL species 0	x 5 = 0
Column Totals: 250 (A)	910 (B)
Prevalence Index = B/A = 3.64	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

SOIL

Sampling Point: UP_20

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_20
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4111708 Long: -82.06869412 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_20</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO/PSS wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>x</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </u> Depth (inches): <u>0.1</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 <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

VEGETATION – Use scientific names of plants.

Sampling Point: WET_20

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Acer rubrum</u>	60	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>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Ulmus americana</u>	40	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	100	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">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>180</u></td> <td>x 3 = <u>540</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>220</u></td> <td>(A) <u>620</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.82</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>180</u>	x 3 = <u>540</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>220</u>	(A) <u>620</u> (B)	Prevalence Index = B/A = <u>2.82</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>180</u>	x 3 = <u>540</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>220</u>	(A) <u>620</u> (B)																			
Prevalence Index = B/A = <u>2.82</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)																				
1. <u>Acer rubrum</u>	80	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Carex blanda</u>	20	Yes	FAC	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>	10	Yes	FAC																	
3. <u>Toxicodendron radicans</u>	10	Yes	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	40	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15'</u> radius)																				
1. _____				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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
		=Total Cover		Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

Remarks: (Include photo numbers here or on a separate sheet.)
 Very heavy leaf litter limited herbaceous stratum growth. .

SOIL

Sampling Point: WET_20

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
 Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_21
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4095025921 Long: -82.0683496339 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: none

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) 		

HYDROLOGY

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

Sampling Point: UPL 21

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer saccharum</i>	50	Yes	FACU
2.	<i>Acer rubrum</i>	50	Yes	FAC
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Rubus allegheniensis</i>	30	Yes	FACU
2.	<i>Prunus serotina</i>	30	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		60	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Dactylis glomerata</i>	40	Yes	FACU
2.	<i>Poa pratensis</i>	30	Yes	FACU
3.	<i>Cirsium discolor</i>	10	No	UPL
4.	<i>Taraxacum officinale</i>	10	No	FACU
5.	<i>Trifolium arvense</i>	10	No	UPL
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 50	x 3 = 150
FACU species 190	x 4 = 760
UPL species 20	x 5 = 100
Column Totals: 260 (A)	1010 (B)
Prevalence Index = B/A = 3.88	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_21

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_21
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4094412861 Long: -82.068645592 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_21</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" 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 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </u> Depth (inches): <u>0.1</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>5</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_21

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>	70	Yes	FAC
2.	<i>Quercus bicolor</i>	20	Yes	FACW
3.	<i>Ulmus americana</i>	10	No	FACW
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<i>Fraxinus pennsylvanica</i>	70	Yes	FACW
2.	<i>Acer rubrum</i>	30	Yes	FAC
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<i>Juncus tenuis</i>	20	Yes	FAC
2.	<i>Trillium cernuum</i>	10	Yes	FAC
3.	<i>Carex blanda</i>	10	Yes	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		40	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (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	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	140	x 3 =	420
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	240 (A)		620 (B)
Prevalence Index = B/A =		2.58	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Very heavy leaf litter limited herbaceous stratum growth. Sphagnum spp. moss exhibited growing on forest floor.

SOIL

Sampling Point: WET_21

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_22
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.3816024315 Long: -82.0666634222 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: none
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.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>x</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Disturbed upland area that parallels Ohio Turnpike			

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"/> 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)	
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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: N/A			

VEGETATION – Use scientific names of plants.

Sampling Point: UPL_22

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	FACU	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">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>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>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>395</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.95</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>10</u>	x 3 = <u>30</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>100</u> (A)	<u>395</u> (B)	Prevalence Index = B/A = <u>3.95</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>10</u>	x 3 = <u>30</u>																			
FACU species <u>85</u>	x 4 = <u>340</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>100</u> (A)	<u>395</u> (B)																			
Prevalence Index = B/A = <u>3.95</u>																				
=Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
Herb Stratum (Plot size: <u>5' radius</u>)																				
1. <u>Poa pratensis</u>	40	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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>Dactylis glomerata</u>	40	Yes	FACU																	
3. <u>Toxicodendron radicans</u>	10	No	FAC																	
4. <u>Daucus carota</u>	5	No	UPL																	
5. <u>Trifolium pratense</u>	5	No	FACU																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
100 =Total Cover																				
Woody Vine Stratum (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
roadside shoulder vegetative features

SOIL

Sampling Point: UPL_22

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/13/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_22
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.3818331808 Long: -82.0666271415 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_22</u>
Remarks: (Explain alternative procedures here or in a separate report.) large wetland with primarily PFO characteristics	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> X </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 45%;"> <u> X </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks) </div> </div>	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> x </u> FAC-Neutral Test (D5)
Field Observations: 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> 14 </u> Saturation Present? Yes <u> x </u> No <u> </u> Depth (inches): <u> 6 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> X </u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site was seasonably wet due to recent heavy spring rains	

Sampling Point: WET_22

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ulmus americana</u>	40	Yes	FACW	
2. <u>Acer saccharinum</u>	30	Yes	FACW	
3. <u>Acer rubrum</u>	30	Yes	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
	100	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)				
1. <u>Acer saccharinum</u>	30	Yes	FACW	
2. <u>Ulmus americana</u>	30	Yes	FACW	
3. <u>Acer rubrum</u>	30	Yes	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
	90	=Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. <u>Carex lacustris</u>	30	Yes	OBL	
2. <u>Carex blanda</u>	30	Yes	FAC	
3. <u>Anemone canadensis</u>	20	Yes	FACW	
4. <u>Phalaris arundinacea</u>	10	No	FACW	
5. <u>Ranunculus hispidus</u>	5	No	FAC	
6. <u>Persicaria pensylvanica</u>	5	No	FACW	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	100	=Total Cover		
Woody Vine Stratum (Plot size: 15' radius)				
1. _____				
2. _____				
3. _____				
4. _____				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (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>165</u>	x 2 = <u>330</u>
FAC species <u>95</u>	x 3 = <u>285</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>290</u> (A)	<u>645</u> (B)
Prevalence Index = B/A = <u>2.22</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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL

Sampling Point: WET_22

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/14/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_22.1
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4022309162 Long: -82.0657081361 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: none
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.)

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>	If yes, optional Wetland Site ID:		
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: (Explain alternative procedures here or in a separate report.)					

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"/> 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)	
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 type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: N/A			

Sampling Point: UPL_22.1

Tree Stratum (Plot size: 30' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	Quercus macrocarpa			60	Yes	FACU
2.						
3.						
4.						
5.						
6.						
7.						
				60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	Acer saccharum			70	Yes	FACU
2.	Quercus macrocarpa			20	Yes	FACU
3.						
4.						
5.						
6.						
7.						
				90	=Total Cover	
Herb Stratum (Plot size: 5' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	Carex pensylvanica			40	Yes	FACU
2.	Podophyllum peltatum			10	Yes	FACU
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
				50	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.						
2.						
3.						
4.						
					=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: 5 (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 0	x 3 = 0
FACU species 200	x 4 = 800
UPL species 0	x 5 = 0
Column Totals: 200 (A)	800 (B)
Prevalence Index = B/A = 4.00	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is $\leq 3.0^1$

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_22.1

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_22.1
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.3818331808 Long: -82.0680170978 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_22</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO/ PSS/ PEM wetland characteristics. Sample plot within emergent portion of wetland.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" 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 type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </u> Depth (inches): <u>0.1</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>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

VEGETATION – Use scientific names of plants.

Sampling Point: WET_22.1

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</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>100</u></td> <td>(A) <u>130</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.30</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>30</u>	x 2 = <u>60</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>100</u>	(A) <u>130</u> (B)	Prevalence Index = B/A = <u>1.30</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>70</u>	x 1 = <u>70</u>																			
FACW species <u>30</u>	x 2 = <u>60</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>100</u>	(A) <u>130</u> (B)																			
Prevalence Index = B/A = <u>1.30</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Carex stricta</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Onoclea sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Juncus effusus</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Phalaris arundinacea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
=Total Cover																				

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

SOIL

Sampling Point: WET_22.1

[illegible]

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/14/14
Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_22.2
Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4033977464 Long: -82.0672054461 Datum: WGS 84
Soil Map Unit Name: Miner silty clay loam NWI classification: none
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.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>x</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

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"/> 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: 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: N/A					

Sampling Point: UPL 22.2

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer saccharum</i>	60	Yes	FACU
2.	<i>Quercus macrocarpa</i>	40	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer saccharum</i>	60	Yes	FACU
2.	<i>Ulmus rubra</i>	20	Yes	FAC
3.	<i>Quercus macrocarpa</i>	20	Yes	FACU
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Carex pensylvanica</i>	60	Yes	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		60	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
			=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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 20	x 3 = 60
FACU species 240	x 4 = 960
UPL species 0	x 5 = 0
Column Totals: 260 (A)	1020 (B)
Prevalence Index = B/A = 3.92	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
very heavy leaf litter did not allow abundant herbaceous stratum growth

SOIL

Sampling Point: UPL_22.2

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain Sampling Date: 5/14/14
 Applicant/Owner: NRG Ohio Pipeline Company LLC State: OH Sampling Point: WET_22.2
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 to 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.4029267701 Long: -82.0662569409 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: Not available

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> If yes, optional Wetland Site ID: <u>WET_22</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) PFO wetland feature			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" 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 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </u> Depth (inches): <u>1</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)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Site was seasonably wet due to recent heavy spring rains		

Sampling Point: WET_22.2

Tree Stratum (Plot size: 30' radius)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Acer rubrum</u>	50	Yes	FAC
2.	<u>Carya laciniosa</u>	50	Yes	FACW
3.				
4.				
5.				
6.				
7.				
		100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1.	<u>Acer rubrum</u>	50	Yes	FAC
2.	<u>Ulmus americana</u>	30	Yes	FACW
3.	<u>Lindera benzoin</u>	20	Yes	FACW
4.				
5.				
6.				
7.				
		100	=Total Cover	
Herb Stratum (Plot size: 5' radius)				
1.	<u>Anemone canadensis</u>	60	Yes	FACW
2.	<u>Mentha arvensis</u>	20	Yes	FACW
3.	<u>Carex blanda</u>	10	No	FAC
4.	<u>Alliaria petiolata</u>	10	No	FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100	=Total Cover	
Woody Vine Stratum (Plot size: 15' radius)				
1.				
2.				
3.				
4.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (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	0	x 1 =	0
FACW species	180	x 2 =	360
FAC species	110	x 3 =	330
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	300 (A)		730 (B)
Prevalence Index = B/A =		2.43	

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.

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 or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL

Sampling Point: WET_22.2

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Avon Lake Gas Addition Project City/County: Lorain County Sampling Date: 5/13/14
 Applicant/Owner: NRG Gas Pipeline Company LLC State: OH Sampling Point: UPL_23
 Investigator(s): Travis Kessler, Lauren Zielke, Aaron Gordon Section, Township, Range: Not available
 Landform (hillside, terrace, etc.): depressions Local relief (concave, convex, none): concave Slope (%): 0 - 2
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.3794289286 Long: -82.0658609821 Datum: WGS 84
 Soil Map Unit Name: Miner silty clay loam NWI classification: none

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> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u> </u>	No <u>x</u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Disturbed upland area that parallels Ohio Turnpike			

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL_23

<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	FACU	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)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
			=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <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>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>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>380</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.80</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>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u>	(A) <u>380</u> (B)	Prevalence Index = B/A = <u>3.80</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>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>100</u>	(A) <u>380</u> (B)																			
Prevalence Index = B/A = <u>3.80</u>																				
			=Total Cover																	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
			=Total Cover	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
			=Total Cover																	
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)																				
1. <u>Poa pratensis</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Plantago rugelii</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Toxicodendron radicans</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Daucus carota</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
			<u>100</u> =Total Cover																	
<u>Woody Vine Stratum</u> (Plot size: <u>15' radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
			=Total Cover																	

 Remarks: (Include photo numbers here or on a separate sheet.)
 roadside shoulder vegetative features

SOIL

Sampling Point: UPL_23

[illegible]

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/19/2014 12:38:56 PM

in

Case No(s). 14-1717-GA-BLN

Summary: Application of NRG Ohio Pipeline Company LLC continued - Attachment I (Part 4)
electronically filed by Teresa Orahod on behalf of Sally Bloomfield