

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 39	Date: 5/14/14		
Direction Photo Taken: North			
Description: Wetland 22 on the northern bank of Ridgeway Ditch.			

Photo No. 40	Date: 5/14/14		
Direction Photo Taken: Southeast			
Description: Blue Line Stream - Ridgeway Ditch.			

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 41	Date: 5/14/14	
Direction Photo Taken: West		
Description: Wetland 22 forested wetland adjacent to residential pond.		

Photo No. 42	Date: 5/14/14	
Direction Photo Taken: South		
Description: Blue Line Stream – Unnamed Stream 2 located within Wetland 22 just southwest of Mile Marker 8.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 43	Date: 5/14/14	
Direction Photo Taken: East		
Description: Wetland 22 forested, scrub-shrub and emergent wetland characteristics.		

Photo No. 44	Date: 5/14/14	
Direction Photo Taken: Northeast		
Description: Wetland 22 forested, wetland characteristics.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project	Site Location: Lorain County, Ohio	Project No. 0237278	

Photo No. 45	Date: 5/14/14	
Direction Photo Taken: South		
Description: Southern terminus of Wetland 22 just north of the Ohio Turnpike.		

Photo No. 46	Date: 05/13/14	
Direction Photo Taken: Northwest		
Description: Wetland 23 emergent wetland along the south side of the Ohio Turnpike.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 47	Date: 05/13/14	
Direction Photo Taken: N/A		
Description: Open storm water conveyance adjacent to Wetland 23 emergent wetland.		

Photo No. 48	Date: 05/13/14	
Direction Photo Taken: North		
Description: Wetland 24 forested and scrub-shrub wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 49	Date: 05/13/14	
Direction Photo Taken: Southeast		
Description: Wetland 25 forested and scrub-shrub wetland.		

Photo No. 50	Date: 05/13/14	
Direction Photo Taken: Southwest		
Description: Blue Line Stream – Unnamed Stream 3 south of Sugar Ridge Road, north of Mile Marker 11.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	Project No. 0237278

Photo No. 51	Date: 03/11/14
Direction Photo Taken: East	
Description: Stream 7 within an agricultural field southwest of mile post 11.	

A photograph showing a stream flowing through a dense thicket of bare, brown shrubs and trees. The water is calm and reflects the surrounding vegetation. The scene is captured from a low angle, looking down the stream.

Photo No. 52	Date: 05/13/14	
Direction Photo Taken: East		
Description: Wetland 26 forested wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 53	Date: 05/13/14	
Direction Photo Taken: East		
Description: Wetland 27 east of Fieldstone Drive emergent wetland.		

Photo No. 54	Date: 05/13/14	
Direction Photo Taken: West		
Description: Wetland 28 emergent wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project	Site Location: Lorain County, Ohio	Project No. 0237278	


Photo No. 55	Date: 05/13/14	
Direction Photo Taken: East		
Description: Wetland 29 forested and scrub-shrub wetland characteristics.		

Photo No. 56	Date: 05/13/14	
Direction Photo Taken: Northwest		
Description: Wetland 29 emergent wetland characteristics.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 57	Date: 05/12/14	
Direction Photo Taken: South		
Description: Wetland 30 emergent and scrub-shrub wetland on the north side of Blue Line Stream - Willow Creek.		

Photo No. 58	Date: 05/12/14	
Direction Photo Taken: East		
Description: Wetland 31 forested wetland on the south side of Blue Line Stream - Willow Creek.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 59	Date: 05/12/14	
Direction Photo Taken: North		
Description: Wetland 32 forested and emergent wetland.		

Photo No. 60	Date: 05/12/14	
Direction Photo Taken: North		
Description: Wetland 33 forested and scrub-shrub wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 61	Date: 05/12/14	
Direction Photo Taken: South		
Description: Blue Line Stream - Jackson Ditch at the southern edge of Wetland 34 forested and emergent wetland.		

Photo No. 62	Date: 05/12/14	
Direction Photo Taken: North		
Description: Wetland 35 forested wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 63	Date: 05/09/14	
Direction Photo Taken: East		
Description: Wetland 36 emergent and scrub-shrub wetland.		

Photo No. 64	Date: 05/09/14	
Direction Photo Taken: West		
Description: Wetland 37 forested wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 65	Date: 05/09/14	
Direction Photo Taken: North		
Description: Blue Line Stream - Alexander Ditch near Wetland 38.		

Photo No. 66	Date: 05/09/14	
Direction Photo Taken: West		
Description: Wetland 38 forested wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project	Site Location: Lorain County, Ohio	Project No. 0237278	

Photo No. 67	Date: 05/09/14	
Direction Photo Taken: South		
Description: Blue Line Stream – Unnamed Stream 4 along west side of Grafton Road/Route 57.		

Photo No. 68	Date: 05/09/14	
Direction Photo Taken: East		
Description: Wetland 39 emergent wetland.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 69	Date: 05/09/14	
Direction Photo Taken: South		
Description: Wetland 40 forested wetland characteristics.		

Photo No. 70	Date: 05/09/14	
Direction Photo Taken: Southwest		
Description: Wetland 41 forested and scrub-shrub wetland characteristics.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 71	Date: 05/09/14	
Direction Photo Taken: Northeast		
Description: Wetland 42 forested, scrub-shrub and unconsolidated wetland characteristics. Blue Line Stream – Oxbow of the East Branch of the Black River shown in photo.		

Photo No. 72	Date: 05/09/14	
Direction Photo Taken: Northeast		
Description: Wetland 43 forested, scrub-shrub and unconsolidated bottom wetland characteristics. Located east of the Blue Line Stream – Oxbow of the East Branch of the Black River shown in photo.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project	Site Location: Lorain County, Ohio	Project No. 0237278	

Photo No. 73	Date: 05/09/14	
Direction Photo Taken: West		
Description: Wetland 44 forested and scrub shrub wetland.		

Photo No. 74	Date: 05/08/14	
Direction Photo Taken: South		
Description: Wetland 45 forested wetland characteristics.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 75	Date: 05/08/14	
Direction Photo Taken: North		
Description: Wetland 46 emergent wetland.		

Photo No. 76	Date: 05/08/14	
Direction Photo Taken: South		
Description: Wetland 47 forested wetland characteristics.		

ERM		PHOTOGRAPHIC LOG	
		Photographer: Travis Kessler	
Project Name: Avon Lake Gas Addition Project		Site Location: Lorain County, Ohio	
		Project No. 0237278	

Photo No. 77	Date: 05/08/14	
Direction Photo Taken: East		
Description: Blue Line Stream - Dent Ditch.		

Photo No. 78	Date: 05/08/14	
Direction Photo Taken: East		
Description: Wetland 48 emergent wetland.		

Attachment I

Wetland Delineation Report – Addendum I



Avon Lake Gas Addition Project
Lorain County, Ohio

Wetland and Water Resources Delineation Report
Addendum 1 (to July 2014 Report)

Prepared by
Environmental Resources Management

Prepared for
NRG Ohio Pipeline Company LLC

October 18, 2014

Avon Lake Gas Addition Project

Lorain County, Ohio

Addendum Wetland and Water Resources Delineation Report

Prepared by

Environmental Resources Management



Signature of Responsible Representative

Donell (Doni) Murphy

Name of Responsible Representative

Table of Contents

INTRODUCTION	4
PROJECT DESCRIPTION	4
GENERAL DESCRIPTION OF SEPTEMBER 2014 SURVEY AREA	5
Drainage and Topography	5
Soils	5
METHODOLOGY	6
Wetland Identification and Delineation	6
Wetland Classification	8
Wetland Categorization	8
Other Waters of the U.S.	8
Hydrologic Connectivity	8
SURVEY RESULTS	9
Delineated Wetlands	9
Other Waters of the U.S.	10
SUMMARY OF FINDINGS	10
REFERENCES	12
LIST OF PREPARERS	13

LIST OF TABLES

Table 1. Summary of Wetlands Delineated within the September 2014 Survey Area.....	10
--	----

APPENDICES

Appendix A	Figures
Appendix B	USACE Routine Wetland Delineation Forms
Appendix C	Ohio Rapid Assessment Method Forms
Appendix D	Photolog

INTRODUCTION

Environmental Resources Management (“ERM”), on behalf of NRG Ohio Pipeline Company LLC (“NRG Pipeline”), delineated wetlands and other waters of the U.S. along a proposed natural gas pipeline survey corridor generally 200-feet in width and approximately 20-miles in length in Lorain County, Ohio in May 2014. NRG Pipeline has been working with affected landowners to acquire the necessary easements throughout most of 2014. Some affected landowners requested adjustments to the proposed route, many of which NRG Pipeline has been able to accommodate. Decisions on requested accommodations were based on, among other things, environmental, geographic, cultural, social and constructability considerations. To account for these route adjustments, this Addendum to the original Wetland and Water Resources Delineation Report (submitted July 2014) details the results of additional field investigations conducted in September 2014 where the route has been adjusted outside of the May 2014 survey corridor. While there were some further route adjustments made after the September field investigation, these adjustments were all within the surveyed corridor.

PROJECT DESCRIPTION

The Avon Lake Power Plant is a 734 MW coal-fired generating facility located in Avon Lake, Ohio (“Power Plant”).¹ The Power Plant is owned by NRG Power Midwest LP (“NRG Midwest”), which is an indirect subsidiary of NRG Energy, Inc. (“NRG”). The Power Plant was slated for retirement by the facility’s prior owner as a result of significant expenditures required to meet increasingly stringent environmental requirements. NRG Midwest has decided to move ahead with a gas addition project, which will keep the facility in operation on natural gas beyond its planned deactivation date (the “Avon Lake Gas Addition Project”). To add natural gas as a fuel supply for the Power Plant, the proposed natural gas pipeline must be designed, permitted and constructed. The Avon Lake Gas Addition Project will bring environmental, economic, employment and electric supply reliability benefits to the region as well as the State. The required in-service date for the pipeline is April 2016.

The proposed 24-inch diameter high-grade steel pipeline will extend south from the Power Plant, which is located along the Lake Erie shoreline in the City of Avon Lake, to a proposed supply tap location southwest of the Village of Grafton. As described in the July 2014 report, a single proposed route was identified as the most feasible direct route between these two points. This route was selected after evaluating and balancing all factors, including environmental, geographic, cultural, and social and constructability considerations. Specific environmental considerations included the presence of and potential for impact to wetlands and waters as well as existing land uses. Various potential routes were analyzed and the May 2014 route emerged as the superior route that best minimized the potential for impact to

¹ The Power Plant also has one oil-fueled unit.

wetlands, waters and other environmental considerations while also balancing the other routing factors. As identified above, that route has since been adjusted to accommodate specific landowner requested adjustments. The proposed pipeline will require siting approval from the Ohio Power Siting Board (“OPSB”), as well as permits and approvals from other local, state and federal agencies.

Approximately 3,922 feet of the proposed pipeline will be aboveground. The pipeline will require a permanent (operation) right-of-way (“ROW”) ranging from 25-feet to 50-feet in width and a temporary (construction) ROW of up to an additional 50-feet. In some areas, additional temporary workspace areas (“TWAs”) outside of the temporary construction ROW will be needed for short durations. Existing public and private roads will be utilized for access to most of the construction ROW; however, approximately 2.2-miles (or 11,806-feet) of 25-foot-wide temporary access roads are anticipated. Finally, the required regulating station will occupy up to approximately one acre. The revised route comprises the May 2014 route and landowner requested adjustments (the “Revised Route”). The collective area of anticipated ground disturbance associated with the Revised Route, including all permanent and temporary ROWs, temporary workspace areas, newly constructed temporary access roads, and footprint of the regulating station encompasses approximately 235 acres.

GENERAL DESCRIPTION OF SEPTEMBER 2014 SURVEY AREA

Drainage and Topography

The September 2014 survey area, hereafter referred to simply as the “survey area”, lies within the Black-Rocky Hydrologic Unit Code (“HUC”) 04110001. This HUC encompasses a large area which includes Lorain County in northern Ohio and is located within the Black River Watershed, which drains north into Lake Erie. No streams or drainage features occur within or cross the survey area. As represented on the Cleveland, Ohio U.S. Geological Survey (“USGS”) 7.5 minute topographic quadrangles (1994), the survey area occurs within a broader area exhibiting gently declining sloping topography toward Lake Erie.

Soils

The soil types occurring within the survey area are representative of the predominant soil types that occur throughout the May 2014 survey corridor and the state of Ohio. Soils within the survey area are mostly hydric.

METHODOLOGY

Wetland Identification and Delineation

Prior to conducting the field investigation, ERM conducted a desktop delineation of wetlands by reviewing National Wetland Inventory (“NWI”) data, Ohio Wetland Inventory (“OWI”) data, the National Hydrography Dataset, the Lorain County Soil Survey, topographic imagery and aerial photography. Geospatial layers associated with these datasets were overlaid with the preliminary Project layout (including the anticipated permanent and temporary ROWs, temporary workspace areas off the ROW, the footprints of the metering and regulating stations and locations of temporary construction access).

Wetlands and waterbodies within the survey area were then field delineated using the procedures outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0* (Environmental Laboratory, 2012). The field investigation was conducted on September 2, September 3, September 4, and September 10, 2014. In accordance with the Regional Supplement, areas that exhibited hydric soils, wetland hydrology and a dominance of hydrophytic vegetation were delineated as wetlands.

Soils were extracted using a drainage spade shovel with a 16-inch blade. These slices of soil were examined for hydric soil characteristics from 0 to 20 inches in the profile. The most important field indicators examined include the hue, value and chroma of the matrix as well as redoximorphic features using the Munsell Soil Color Chart (Kollmorgen Instrument Corporation, 1994). Generally, soils that exhibit redoximorphic features with a matrix chroma of two or less, or soils without redoximorphic features that exhibit a chroma of one or less are shown to exhibit hydric soil characteristics (Environmental Laboratory, 2012).

The hydrology criterion included within the Regional Supplement requires that an area must exhibit one primary indicator of wetland hydrology and at least two secondary indicators of wetland hydrology. Primary indicators include standing water, saturated soils, water marks on trees, drift lines, water stained leaves and oxidized root zones surrounding living roots. Secondary indicators of wetland hydrology include drainage patterns, microtopographic relief, presence of crayfish burrows and sparsely vegetated concave surfaces. Additional signs of wetland hydrology include visible saturation on aerial photography and a positive FAC-neutral test (see below) (Environmental Laboratory, 2012).

Dominant vegetation for each community was determined by estimating the percentages of dominant species in the tree, sapling, shrub, herb and woody vine strata. Dominant species were examined by using the 50/20 percent dominance rule for each stratum. This was accomplished by determining the estimated percent aerial cover for each species. The relative percent aerial cover was calculated by dividing each species percent cover by the total percent cover for all species and multiplying by 100. These species were then arranged in descending order of relative percent cover. A running total was kept by adding the relative cover of each

species starting with the species with the highest relative cover until the total cover equaled 50 percent. All species that were included within this calculation were regarded as dominant. Species of equal cover that contributed to meeting the sum of 50 percent were also regarded as dominant. Additionally, other species that solely accounted for 20 percent or more of the relative percent cover were also considered dominant species. The indicator status of each dominant species was then determined. An indicator status of obligate wetland ("OBL"), facultative wetland ("FACW"), facultative ("FAC") facultative upland ("FACU") and/or upland ("UPL") has been assigned to each plant species on the *National List of Plant Species that Occur in Wetlands: Region 1* (Reed, 1988). An area has hydrophytic vegetation when, under normal circumstances, more than 50 percent of the composition of dominant species from all strata is OBL, FACW, and/or FAC species.

The FAC-neutral test was calculated for each dataset as a means of determining the presence of wetland hydrology. This test considers all FAC species as neutral for wetland determination and compares the number of dominant species wetter than FAC (i.e., OBL, FACW) against the number of dominant species drier than FAC (i.e., FACU, UPL). A positive FAC-neutral test results when a dominant species wetter than FAC are more prevalent than dominant species drier than FAC. A positive FAC-neutral test is a secondary indicator of wetland hydrology.

To the extent possible, the hydrophytic vegetation decision should be based on the plant community that is normally present during the wet portion of the growing season in a normal rainfall year (Environmental Laboratory, 2012). The growing season has begun on a site in a given year when two or more different non-vascular plant species growing in the wetland or surrounding areas exhibit one of the following: the emergence of herbaceous plants from the ground, the appearance of new growth from vegetative crowns, coleptile/cotyledon emergence from seed, bud burst on woody plants (i.e., some green foliage visible between spreading bud scales), the emergence or elongation of leaves of woody plants, or the emergence of opening flowers (Environmental Laboratory, 2012). The wetland delineation fieldwork within the survey area was conducted within the occurrence of these events and therefore, inside the growing season.

Sample plots that met the three criteria for hydric soils, wetland hydrology and hydrophytic vegetation were considered wetlands. The boundaries of wetlands were determined where there was a transition and one or more of the wetland defining criteria was determined to instead exhibit upland characteristics. Samples were also taken in adjacent areas that were clearly upland to further confirm that the wetland boundary was appropriately delineated.

The delineated wetland boundaries were field documented through the use of a Trimble Global Positioning System ("GPS") receiver capable of sub-meter accuracy. The delineated wetlands were identified by number and correspond to the wetlands illustrated on the wetland and stream maps (Figures 1-25). The wetland boundaries were recorded as polygons and the

wetland areas were calculated using the shapefile properties utility in ArcMap, a Geographic Information System ("GIS") software.

Wetland Classification

The U.S. Fish and Wildlife Service ("USFWS") uses the *Classification of Wetlands and Deepwater Habitats of the United States* to classify wetland habitat types (Cowardin et al, 1979). This classification system is hierarchical and defines five major systems – Marine, Estuarine, Riverine, Lacustrine, and Palustrine. Palustrine wetlands are generally referred to as non-tidal or freshwater wetlands.

Wetland Categorization

Ohio's Wetland Water Quality Standards require that "an appropriate wetland evaluation methodology acceptable to the director" be implemented to determine the appropriate category for each wetland. This evaluation is conducted in Ohio through the application of the Ohio Rapid Assessment Method ("ORAM"). The ORAM method results in wetlands being scored based on the characteristics they exhibit. Their resulting scores are then used to determine which category of wetland they are for regulatory review purposes. ORAM forms must be completed for each wetland. ERM relied on the current ORAM method to categorize the field delineated wetlands (ORAM, Version 5.0) (Mack, 2001; Appendix C).

Since the ORAM is a rapid assessment method, there are certain wetland scores which fail to clearly differentiate the wetland's functional category. The so-called "gray zone" wetlands fall between the definite scoring breaks between the categories. OEPA requires that "gray zone" wetlands be considered as the higher category unless more detailed functional assessments such as the VIBI or AmphIBI are conducted on those wetlands. As a result of this requirement, wetlands whose scores fall between the breakpoints for Categories 1 and 2 (1 or 2 gray zone wetlands) wetlands were considered as Category 2 wetlands for the purposes of this report. Wetlands whose scores fall between the breakpoints for Categories 2 and 3 wetlands (2 or 3 gray zone wetlands) were considered a Category 3 wetland for the purposes of this report.

Other Waters of the U.S.

The survey area was screened for the presence of areas that meet the criteria for "other waters of the U.S." These areas consist of ephemeral, intermittent and perennial streams, as well as open water habitats such as ponds. No streams or drainage features occur within or cross the survey area.

Hydrologic Connectivity

Permanent impacts to all delineated wetlands determined to be jurisdictional to the USACE will be subject to permit authority from the USACE. Permanent impacts to any remaining isolated wetlands will be treated as waters of the state of Ohio and subject to permit authority from the

ODNR. Wetland permitting will also be subject to water quality certification from the OEPA. While all delineated wetlands could be determined jurisdictional to the USACE regardless of hydrologic connectivity, the hydrology of each wetland within the survey area was still evaluated.

SURVEY RESULTS

Delineated Wetlands

Ten wetlands were delineated in the September 2014 survey area. Previously surveyed wetland boundaries were updated within the new survey corridor, to the extent applicable, as depicted on Figures 1-25. All wetlands that were delineated within the survey area are described in terms of location, jurisdictional status, and quality as dictated by the ORAM Version 5.0. Individual data forms included within Appendix B provide the field support and details regarding the wetland/upland boundary determination. The ORAM forms completed for each individual wetland delineated within the survey area are included as Appendix C. Photographic documentation of each area delineated is included in Appendix D.

The locations and extents of the field delineated wetlands are depicted on Figures 1-25. Each delineated wetland is identified by number (e.g., Wetland 1.1, Wetland 2.1, etc.). The reader may refer to these figures and the wetland delineation data forms (Appendix B) for detailed delineation data. The assumed jurisdictional status, preliminary ORAM score and the on-site acreage of each delineated wetland is included in Table 1.

Of the ten wetlands delineated within the September 2014 survey area, all were classified as palustrine. Most are palustrine forested ("PFO") depressional wetlands that are located adjacent to agricultural areas that have been actively farmed and ditched. Palustrine emergent ("PEM") depressional wetlands are also scattered throughout the survey area within wet meadows and areas that have endured past clear cutting and farming activities. The remaining wetlands within the survey area are contiguous with streams or drainages that flow off-site. According to an examination of available aerial imagery (i.e., USGS topographic maps, aerial photography, etc.), these streams eventually drain into the East Branch of the Black River, which is connected to the main branch of the Black River and flows into Lake Erie. These wetlands were assumed to be "waters of the U.S.", which would make them subject to regulations pursuant to Section 404/401 of the Clean Water Act. However, the USACE makes the final determination as to the jurisdiction of a wetland, stream or other water resource.

Wetlands delineated within the survey area were comprised of three that were rated as Category 1 wetlands and seven rated as Category 2 wetlands, in accordance with ORAM. No Category 3 wetlands were delineated in the September 2014 survey area. Category 1 wetlands have generally undergone considerable substrate disturbance, habitat alteration and modifications to their hydrologic regime. In addition, many Category 1 wetlands exhibit a

dominance of invasive species, which was substantiated during the field investigation. Category 2 wetlands have undergone significant disturbance to their substrate, habitat, and hydrologic regime, but have generally recovered. Category 3 wetlands are of high quality and have not undergone measureable substrate disturbance habitat alteration, or modifications to their hydrologic regime.

Table 1. Summary of Wetlands Delineated within the September 2014 Survey Area

Wetland Name	Wetland Type ²	ORAM Score ¹	Acreage Within Survey Corridor	Wetland Category ¹
Wetland 25.1	PFO	30	0.8	2
Wetland 32.1	PFO	29	2.4	1
Wetland 33.1	PFO	28	1.0	1
Wetland 37.1	PFO	33	3.4	2
Wetland 41.1	PFO/PSS	42	1.1	2
Wetland 42.1	PFO	49.5	0.8	2
Wetland 43.1	PFO	36	2.2	2
Wetland 44.1	PFO	32	3.0	2
Wetland 45.1	PEM	27	0.6	1
Wetland 47.1	PFO	39	3.2	2
		TOTAL	18.5	

¹Wetlands were categorized and scored using ORAM, Version 5.0.

²Wetland types were determined according to Cowardin (1979).

Other Waters of the U.S.

No new perennial streams or intermittent streams/drainages were identified within the survey area.

SUMMARY OF FINDINGS

As a result of ERM's field investigation, ten wetlands were delineated, in whole or in part, within the survey area. Nine of the ten delineated wetlands are at least partially forested. Permanent impacts to all delineated wetlands determined to be jurisdictional to the USACE will be subject to permit authority from the USACE. Permanent impacts to any remaining isolated wetlands will

be treated as waters of the state of Ohio and subject to permit authority from the ODNR. Wetland permitting will also be subject to water quality certification from the OEPA.

The information included in this wetland and water resource delineation should be considered preliminary until a formal Jurisdictional Determination (JD) is made by the USACE regarding the regulatory status of the wetlands within the survey area.

REFERENCES

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and Deepwater habitats of the United States. Office of Biol. Services, U.S. Fish and Wildlife Service, Washington, D.C. 103p.
- Environmental Laboratory. 1987. Technical Report Y-87-1: Corps of Engineers Wetlands Delineation Manual. US Army Corps of Engineers, Waterways Experiment Station. January 1987.
- Environmental Laboratory. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northeast and Northcentral Region. Version 2.0. ERDC/EL TR-12-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS
- Kollmorgen Instrument Corporation. 1994. Munsell soil color charts. Revised Edition. Newburgh, New York.
- Mack, John J. 2001. Ohio Rapid Assessment Method for Wetlands v. 5.0 User's Manual and scoring forms. Ohio EPA Technical Report WET/2001-1. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.
- Natural Resources Conservation Service. 2011. Hydric Soils of the United States. ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/Lists/hydric_soils.xlsx. Accessed May 27, 2014.
- Natural Resources Conservation Service. 2011. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed May 27, 2014.
- Rapanos et ux. v. United States. 2006. U.S. Supreme Court website. <http://www.supremecourtus.gov/>. Accessed May 27, 2014.
- Reed, Jr. Porter B. 1988. National List of Plant Species that Occur in Wetlands: National Summary. U.S. Fish & Wildlife Service. Biol. Rep. 88 (24). 244 pp.
- SWANCC v. U.S. Army Corps of Engineers, et al. 2001. U.S. Supreme Court website. <http://www.supremecourtsus.gov/>. Accessed May 27, 2014.
- Tyler, D.J., and Greenlee, S.K., 2012, Creation of digital contours that approach the characteristics of cartographic contours: U.S. Geological Survey Scientific Investigations Report 2012–5167, 31 p. with appendices.
- U.S. Congress. 1972 (amended 1977, 1987). 33 U.S.C. § 1251 et seq., U.S. Clean Water Act. United States Congress.
- U.S. Fish & Wildlife Service. 2011. National Wetlands Inventory Online Mapper. U.S. Department of the Interior. <http://www.fws.gov/wetlands/Data/Mapper.html>. Accessed May 27, 2014.

LIST OF PREPARERS

Murphy, Donell (Doni). B.S. Forest Biology

Sphar, Jason. B.A. Applied Geography

Teichert, Matt. B.A. Geography

Williams, Jeff. B.S. Biology

Zielke, Lauren. B.S. Biology

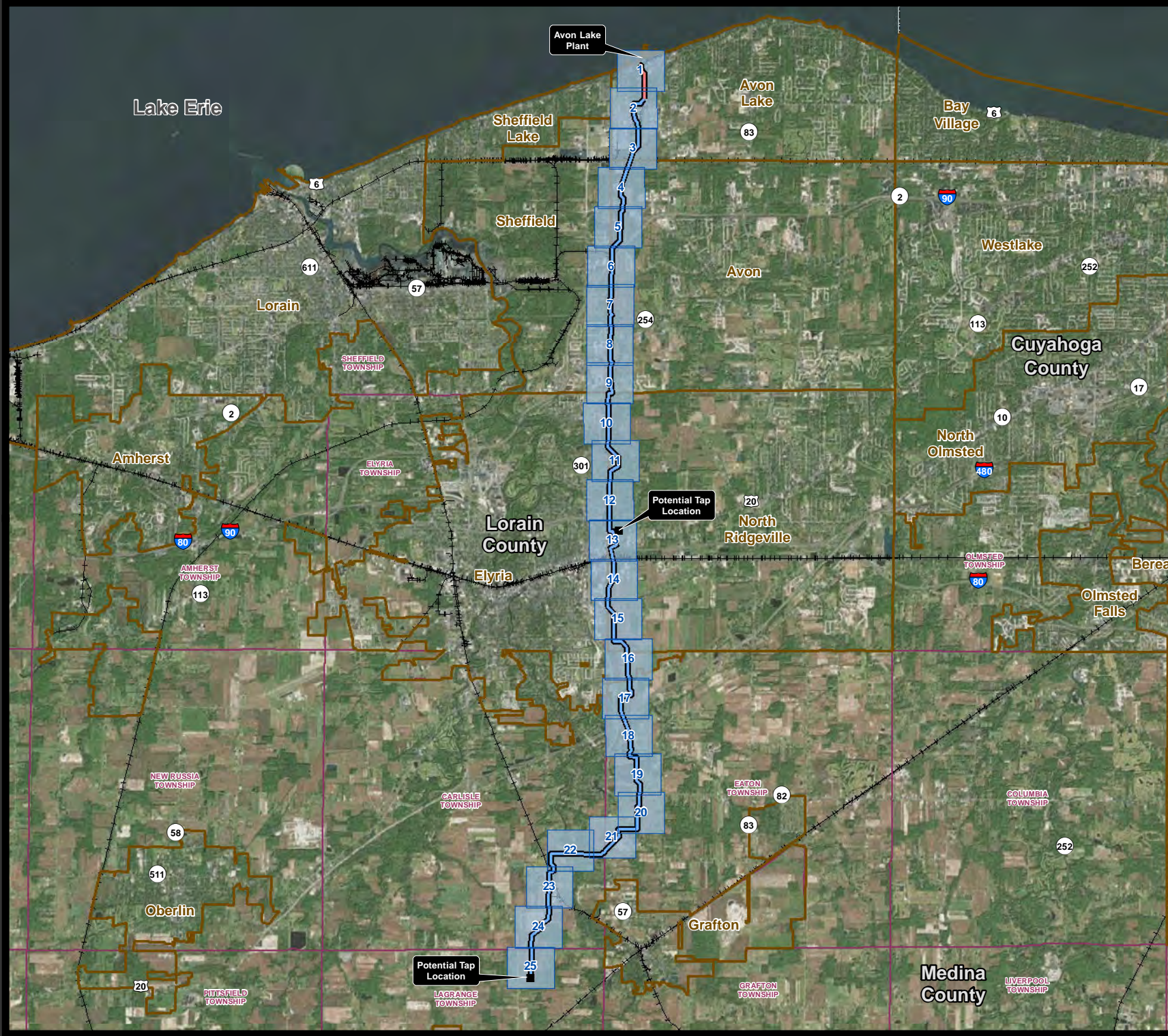
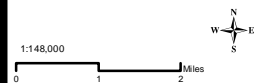
Appendix A

Figures

Legend

- Above Ground Proposed Route
- Below Ground Proposed Route
- Map Extent Boundary
- County Boundary
- Political Township Boundary
- Municipal Boundary
- Railroad
- Roads
 - Interstate
 - US Highway
 - State Highway

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GEBCO, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, GeoMapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community



This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/19/2014 12:44:13 PM

in

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

Summary: Application of NRG Ohio Pipeline Company LLC continued - Attachment I (Part 8)
electronically filed by Teresa Orahod on behalf of Sally Bloomfield