STREAM AND WETLAND DELINEATION REPORT

HARRISON POWER PIPELINE

HARRISON COUNTY, OHIO

September 2020

Prepared for:

Harrison Power Pipeline, LLC. 3000 Wilcrest Drive, Suite 200 Houston, TX 77042

Prepared by:

Kleinfelder, Inc. 51 Dutilh Road, Suite 240 Cranberry Twp., PA 16066 p | 724-772-7072



REPORT CERTIFICATION

This report, including delineation details and conclusions, has been prepared under supervision and review by the persons named below. This report shall not be reproduced in full or in part without the written consent of Kleinfelder, Inc.

Date	09/09/2020	Signature Jue M Vovanic
		Name: Jill M. Vovaris Title: Program Manager Kleinfelder, Inc.
Date	09/09/2020	Signature
		Name: John A. Lewis Title: Project Professional Kleinfelder, Inc.

TABLE OF CONTENTS

EXE	CUTIVE SUMMARY	1
1.0	INTRODUCTION	2
2.0	STREAM AND WETLAND DELINEATION PROCEDURES	2
3.0	BACKGROUND INFORMATION	3
3.1	1 Desktop Findings	3
3.2	2 Soils Information	4
3.3	3 Climate and Site Conditions	4
4.0	STREAM AND WETLAND DELINEATION RESULTS	5
4.1	1 Wetland Descriptions	5
4.2	2 Upland Habitats	5
4.3	3 Streams Descriptions	5
5.0	CLOSING REMARKS	6
6.0	REFERENCES	7

TABLES

Table 1	Mapped Soil Units within the AOI
Table 2	Streams and Wetlands Identified in the AOI
Table 3	Stream Descriptions
Table 4	Wetland Descriptions

FIGURES

Figure 1	USGS Topographic Map
Figure 2	Aerial Imagery Map

ATTACHMENTS

Attachment A	USACE Wetland Determination Data Forms
Attachment B	Ohio Rapid Assessment Method (ORAM) Forms
Attachment C	Headwater Habitat Evaluation Index (HHEI) Forms
Attachment D	Photo Log
Attachment E	Approved Jurisdictional Determination (AJD)

EXECUTIVE SUMMARY

On behalf of Harrison Power Pipeline, LLC., Kleinfelder, Inc. (Kleinfelder) conducted stream and wetland delineations on July 23, 2020 for the proposed Harrison Power Pipeline (Pipeline) within an approximately 23.4-acre area of interest (AOI) located in Harrison County, Ohio.

During the site review, Kleinfelder identified 3 streams and 5 wetlands. Overlapping delineations were also performed in the AOI by:

- Kleinfelder for the Harrison Power Plant in January 2018, which identified zero streams and zero wetlands; and
- Kleinfelder for the Harrison Power Transmission Line in June 2018, which identified zero streams and zero wetlands.

Overall, a total of 3 ephemeral streams and 5 palustrine emergent wetlands were identified within the AOI.

Site-specific details are provided in Section 1.0. The methodology utilized for the site review and desktop analysis is provided in Sections 2.0 and 3.0. Section 4.0 provides documentation of the features identified during delineation of the AOI.

1.0 INTRODUCTION

On behalf of Harrison Power Pipeline, LLC. (Harrison Power), Kleinfelder, Inc. (Kleinfelder) conducted stream and wetland delineations on July 23, 2020 within an approximately 23.4-acre area of interest (AOI) for the proposed Harrison Power Pipeline (Pipeline) located in Harrison County, Ohio (OH). The proposed Pipeline is located on the Flushing and Jewett, OH 7.5-minute United States Geological Survey (USGS) quadrangles, as depicted on the USGS Topographic Map (**Figure 1**). Aquatic resources identified within the AOI are listed in **Table 2**.

The following report documents the conditions of the proposed Pipeline AOI and the protocol used to identify streams and wetlands. Findings provided in this report are representative of conditions at the time of the field investigations.

2.0 STREAM AND WETLAND DELINEATION PROCEDURES

Stream and wetland delineations were completed in accordance with the wetland delineation methodology outlined in the 1987 *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* [United States Army Corps of Engineers (USACE), 2012]. This approach utilizes three parameters including vegetation, soils, and hydrology to identify and delineate wetlands. In situations when one or more of these parameters was absent due to natural, seasonal, or man-made disturbances, a determination was made if the missing parameter(s) would occur under normal circumstances based on field indicators and best professional judgement.

Prior to fieldwork, field biologists reviewed available mapping (topographic, aerial, and historic aerial imagery) to identify areas containing wet signatures and to understand what stream and/or wetlands may be encountered. Additionally, a desktop evaluation was conducted to identify Natural Resources Conservation Service (NRCS) soils, United States Fish and Wildlife Service National Wetland Inventory (USFWS NWI) wetlands, National Hydrography Dataset (NHD) streams, and Federal Emergency Management Agency (FEMA) floodplains that may be located within or near the AOI.

During field investigations, the boundaries of surface water features were recorded using a Trimble Geo7X Model. Hydrology, vegetation, and soils were documented at sampling locations throughout the AOI. The information obtained at sampling locations was recorded on data sheets, provided in **Attachment A**, as per the 1987 USACE Manual Protocol. Nomenclature and indicator status of vegetative species was identified using *The National Wetland Plant List: 2018 Wetland Ratings* (Lichvar et al., 2018). Wetlands and streams were classified according to Cowardin et al.

(1979) guidelines. Delineated resources were classified according to Classification of Wetlands and Deepwater Habitats of the United States, Second Edition (FGDC, 2013). Wetlands were also evaluated using the Ohio Rapid Assessment Method (ORAM) for Wetlands V. 5.0 (Mack 2001).

Streams were identified based on the presence of defined bed and banks and an observable ordinary high-water mark (OHWM). Geomorphic traits such as flow regime, bank height, width and depth, sinuosity, stream bed substrate, and bank erosion were also used. In addition, streams were assessed for percent riparian canopy cover and the absence/presence of macroinvertebrates. Stream data was documented according to Ohio Environmental Protection Agency (OEPA) guidance using the Primary Headwater Habitat Evaluation Index (HHEI) and/or the Qualitative Habitat Evaluation Index (QHEI), as applicable (Ohio EPA 2018).

The USACE defines perennial, intermittent, and ephemeral streams as follows:

- Perennial streams are defined as having running water throughout much of the year with groundwater contributing to stream flow.
- Intermittent streams are defined as having running water during certain times of the year when groundwater contributes to stream flow.
- Ephemeral streams are defined as having running water primarily after storm events and are dry much of the year because the water table is generally well below the stream bed (Environmental Laboratory, 1987).

According to The Navigable Waters Protection Rule: Definition of "Waters of the United States" published in the Federal Register on April 21, 2020 and went into effect on June 22, 2020, the following aquatic resources are considered federally jurisdictional: territorial seas and traditionally navigable waters (TNWs), tributaries, lakes, ponds, and impoundments of jurisdictional waters, and adjacent wetlands. Kleinfelder considered this rule when performing stream and wetland delineations for the proposed Pipeline. Kleinfelder requested an approved jurisdictional determination through the USACE Huntington District on July 31, 2020 for the aquatic resources identified within the AOI.

3.0 BACKGROUND INFORMATION

3.1 Desktop Findings

The proposed Pipeline AOI consists of early successional forests, existing industrial infrastructure, open pasture fields, palustrine emergent (PEM) wetlands, and unnamed tributaries (UNTs) to Brushy Fork. The proposed Pipeline AOI is bordered by agricultural fields, early successional forests, and existing industrial infrastructure.

The NWI Program under the USFWS is responsible for the mapping and the inventory of major wetlands within the United States. The USFWS Wetlands Mapper was used to review NWI wetlands within the AOI (http://www.fws.gov/Wetlands/Data/Mapper.html). According to a desktop review of available USFWS NWI digital data, no NWI wetlands are located within the AOI. An examination of the USGS mapping and spatial data indicated 1 mapped stream is located within the AOI, Brushy Fork; however, the field investigation determined Brushy Fork to be located outside of the AOI. NRCS soil mapping indicated 3 partially hydric component soil units are present within the AOI. A review of FEMA flood insurance rate mapping, Panel 39067C0194D and 39067C0310D, revealed that no portions of the AOI are within the limits of a designated regulatory floodplain (Figure 2).

Topography across the proposed Pipeline AOI consists of rolling hills and valleys with elevations ranging from 450 feet to 810 feet above mean sea level.

3.2 Soils Information

The NRCS Web Soil Mapper identified 3 soil units occurring within the AOI as shown in Table 1.

TABLE 1: MAPPED SOIL UNITS WITHIN AOI										
MUSYM	NAME	HYDRIC RATING*	ACREAGE WITHIN AOI							
МоВ	Morristown channery silty clay loam, 0 to 8 percent slopes, stony	Partially	7.5							
MoD	Morristown channery silty clay loam, 8 to		6.9							
MrF	Morristown channery silt loam, 25 to 70 percent slopes, bouldery	Partially	9.0							

^{*}A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Hydric soils along with hydrophytic vegetation and wetland hydrology are used to define wetlands. (NRCS, National Soil Survey handbook)

Soils information specific to sample point locations is presented on the datasheets found in **Attachment A**.

3.3 Climate and Site Conditions

Precipitation totaling 0.36 inches was recorded in the 48 hours preceding the July 2020 field visit and the recorded temperature was 82 degrees Fahrenheit. Based on a comparison of annual precipitation data, climate conditions in the three months prior to the July 2020 field visit resulted

in drier conditions than are typical for this area during that time of year (https://www.wunderground.com/).

4.0 STREAM AND WETLAND DELINEATION RESULTS

Kleinfelder identified 3 streams and 5 wetlands within the AOI. A table of documented habitat conditions within these aquatic resources as well as a narrative summary of upland habitats is provided in **Sections 4.1, 4.2**, and **4.3** below. Please refer to the Aerial Imagery Map (**Figure 2**) for the location of mapped features. Habitat and biological conditions specific to sampling locations are found on datasheets in **Attachment A**. Rapid assessments of the quality and category of each wetland are found on ORAM forms in **Appendix B**. Assessments of the quality of each stream are found on HHEI forms in **Appendix C**. Photographs of each wetland and stream within the AOI are presented in **Appendix D**.

4.1 Wetland Descriptions

Five wetlands were identified and delineated within the AOI. Data collected during delineation activities indicated that soils, vegetation, and hydrology parameters met the criteria to be considered a wetland. Wetlands that were geographically isolated from other aquatic resources or did not maintain a connection to a jurisdictional aquatic feature were classified as isolated. Wetland descriptions are summarized in **Tables 2 and 4** and shown in **Figure 2**.

4.2 Upland Habitats

The majority of the proposed Pipeline AOI consists of early successional forests, existing industrial infrastructure, and open pasture fields. The early successional communities are dominated by *Robinia pseudoacacia* (black locust, FACU), *Elaeagnus umbellata* (autumn olive, UPL), and *Rosa multiflora* (rambler rose, FACU). Dominant plant species within open pasture fields consisted of *Dactylis glomerata* (orchard grass, FACU), *Phluem pratense* (common timothy, FACU), and *Bromus inermis* (smooth brome, UPL).

Sample point locations not exhibiting wetland hydrology, hydrophytic vegetation, and/or hydric soils were classified as upland. Please refer to the field datasheets provided in **Attachment A** for additional information specific to the upland conditions documented within the AOI.

4.3 Stream Descriptions

Three streams were identified and delineated within the AOI. Streams were classified based on the presence of defined bed and banks, an observable OHWM, substrate, flow regime, sinuosity of channel along the thalweg, grade control, alluvial deposition, leaf litter, and the

absence/presence of macroinvertebrates, fish, and other aquatic fauna. Streams identified as ephemeral were classified as non-jurisdictional. The identified streams within the AOI are located within the Brushy Fork watershed and are summarized in **Tables 2 and 3** and shown in **Figure 2**.

5.0 CLOSING REMARKS

This report presents an unverified Jurisdictional Determination of the proposed Pipeline AOI based on the author's scientific opinion. Formal determination of jurisdiction regarding Waters of the United States (WOTUS) can only be determined by the USACE with the submittal of a jurisdictional determination request by the proponent. Kleinfelder requested an approved jurisdictional determination (AJD) through the USACE Huntington District on July 31, 2020. A copy of the AJD results will be attached to this report for future reference, upon receipt (Appendix E).

All work was completed in accordance with the 1987 USACE Wetland Delineation Manual and the Eastern Mountains and Piedmont Regional Supplement. Aquatic resources described within this report are those which were identified within the AOI. All depictions and accounts described within this report are based on field observations made at the time of the investigation.

Wetland delineation studies are generally conducted to support permit applications for various sites including those associated with oil and gas development. Wetlands can be subject to national, state, and/or local regulations that can vary in regulatory scrutiny across political and agency boundaries. Aquatic resource boundaries identified in the field will be considered preliminary unless confirmed by Federal and/or State agencies (jurisdictional determination or otherwise). Preliminary boundaries of aquatic resources are acceptable for permitting; however, final determination rests solely at the discretion of the government entity or entities and may occur at any point during the permit process. The decision may depend on the applicable law or regulations governing the decision. Proposed activities within regulated wetlands or streams may require authorization through the receipt of a permit prior to the initiation of any development related site disturbances. As engineers and scientists, we cannot provide legal advice nor guarantee any government ruling. We also cannot accept responsibility for any change in law or regulation.

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

6.0 REFERENCES

- Cowardin, L.M., V. Carter V., F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service Report No. FWS/OBS/-79/31. Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A176 912.
- Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Federal Register. 2020. The Navigable Waters Protection Rule: Definition of "Waters of the United States." Vol. 85, No. 77. Tuesday, April 21.
- Federal Register. 1994. Changes in Hydric Soils of the United States. Vol. 59, No. 133. Wednesday, July 13.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2016. *The National Wetland Plant List: 2018* wetland ratings. Phytoneuron 2016-30: 1-17.
- Mack, John J. 2001. Ohio Rapid Assessment Method for Wetlands, Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.
- Ohio EPA. 2018. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 129 pp.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U. S. Department of Agriculture, National Resources Conservation Service (USDA NRCS). 2008. Soil Survey Geographic (SSURGO) Database for (Harrison County), Ohio. Available at http://websoilsurvey.sc.egov.usda.gov.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2018. *Field Indicators of Hydric Soils in the United States, Version 8.2*. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- U.S. Fish and Wildlife Service. 2019. National Wetlands Inventory. Accessed at: http://www.fws.gov/wetlands/Data/Mapportion.html.

TABLE 2 STREAMS AND WETLANDS IDENTIFIED IN THE AOI

	Table 2: Streams and Wetlands Identified in the AOI															
Waters Name ¹	Cowardin Code ²	HGM Code ²	Measurement Type	Amount	Units	Waters Type ²	Federally Jurisdictional ³ (Yes or No)	Latitude ⁴	Longitude ⁴	Local Waterway	OH WQ Class⁵	PHWH Class ⁶	HHEI Score ⁷	QHEI Score ⁷	ORAM Score ⁸	ORAM Category ⁸
Streams																
KLF-STREAM15 (EPH)	R6	N/A	Linear	46	Feet	NRPW	No	40.249368	-81.024285	UNT to Brushy Fork	N/A	Class I	29	N/A	N/A	N/A
KLF-STREAM16 (EPH)	R6	N/A	Linear	99	Feet	NRPW	No	40.249496	-81.024062	UNT to Brushy Fork	N/A	Class I	29	N/A	N/A	N/A
KLF-STREAM17 (EPH)	R6	N/A	Linear	97	Feet	NRPW	No	40.251586	-81.025727	UNT to Brushy Fork	N/A	Class I	29	N/A	N/A	N/A
Wetlands																
KLF-WETLAND39 (PEM)	PEM	DEPRESS	Area	0.017	Acre	N/A	No	40.248098	-81.020984	N/A	N/A	N/A	N/A	N/A	18.5	Category 1
KLF-WETLAND40 (PEM)	PEM	SLOPE	Area	0.062	Acre	N/A	No	40.249006	-81.024215	N/A	N/A	N/A	N/A	N/A	18.5	Category 1
KLF-WETLAND41 (PEM)	PEM	DEPRESS	Area	0.014	Acre	N/A	Yes	40.249661	-81.024339	N/A	N/A	N/A	N/A	N/A	22.5	Category 1
KLF-WETLAND42 (PEM)	PEM	DEPRESS	Area	0.023	Acre	N/A	Yes	40.251153	-81.025830	N/A	N/A	N/A	N/A	N/A	18.5	Category 1
KLF-WETLAND43 (PEM)	PEM	DEPRESS	Area	0.063	Acre	N/A	No	40.252280	-81.027746	N/A	N/A	N/A	N/A	N/A	18.5	Category 1

NOTES:

- 1. Kleinfelder, Inc naming convention.
- 2. As determined by the USACE's Waters Upload Sheet (pers. comm.)
- 3. Features classified as ephemeral or observed to not maintain a connection to jurisdictional waters are identified as non-jurisdictional according to The Navigable Waters Protection Rule: Definition of "Waters of the United States" published in the Federal Register on April 21, 2020 and effective on June 22, 2020.
- 4. North American Datum 1983.
- 5. As defined by OAC Chapter 3745-1 Water Quality Standards, Water use designations and statewide criteria (OAC 3745-1-07). http://www.epa.ohio.gov/dsw/rules/3745_1.aspx.
- 6. Scoring for OEPA Headwater Habitat Evaluation Index (HHEI) Primary Headwater Habitats (PHWH). Class I = 0-29.9 and include "normally dry channels with little or no aquatic life present"; Class II = 30-69.9 and are equivalent to "warm water habitat"; Class III = 70-100 and typically have perennial flow with cool-cold water adapted native fauna.

 Streams classified as Class III PHWH by a Level 1 or Level 2 Assessment are assumed Class IIIB PHWH unless disproved by Level 3 Assessment.
- 7. Streams with drainage areas > 1 sq. mi., which have not received a water use designation under OAC 3745-1 were scored based on OEPA's Methods for assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI), June 2006. http://www/epa.state.oh.us/portals/35/documents/qheimanualjune2006.pdf. Scoring > 75 = Excellent stream habitat; 60-74 = Good; 45-59 = Fair; 30-44 = Poor; < 30 = Very Poor.
- 8. Scoring for ORAM v 5.0: Category 1 = 0-29.9; Category 1 or 2 Gray Zone = 30-34.9; Category 2 or 3 = 60-64.9; Category 2 or 3 = 60-64.9; Category 2 or 3 = 60-64.9; Category 3 = 65-100. ORAM v 5.0 Quantitative Score Calibration, Last Revised: August 15, 2000. http://epa.ohio.gov/portals/35/401/oram50sc_s.pdf.

TABLE 3

STREAM DESCRIPTIONS

	Table 3: Stream Descriptions												
Stream Name	Stream Type	OHWM Width (feet)	OHWM Depth (Inches)	Flow at Time of Delineation	Flow Direction	Bank Definition	Substrate	Aquatic Fauna	Comments				
KLF-STREAM15	Ephemeral	3.0	4.0	No	Northwest	Well Defined	•Sand •Gravel •Cobble	•None	Located in the central portion of the AOI, this stream originates within the AOI and flows northwest until the stream dissipates within the AOI.				
KLF-STREAM16	Ephemeral	4.0	4.0	No	West	Well Defined	•Sand •Gravel •Cobble	•None	Located in the central portion of the AOI, this stream originates within the AOI and flows west until the stream dissipates within the AOI.				
KLF-STREAM17	Ephemeral	4.0	6.0	No	Southwest	Well Defined	•Sand •Gravel •Cobble	•None	Located in the central portion of the AOI, this stream originates outside the AOI and flows southwest until the stream dissipates within the AOI.				

TABLE 4

WETLAND DESCRIPTIONS

			Table 4: Wetland Descriptions				
Wetland Name	Wetland Type	Wetland Hydrology Indicators	Dominant Vegetation Species	Hydric Soil Indicators	Associated Data Point	Upland Comparison Data Point	Comments
KLF-WETLAND39	PEM	Algal Mat or Crust Oxidized Rhizospheres on Living Roots Surface Soil Cracks Geomorphic Position FAC-Neutral Test	∙blunt spike-rush (Eleocharis obtusa)	•Depleted Matrix	KLF-SP77	KLF-SP78	Located in the southeast portion of the AOI. The wetland is located in a depression within an open herbaceous pasture field.
KLF-WETLAND40	PEM	Oxidized Rhizospheres on Living Roots FAC-Neutral Test	•common fox sedge (Carex vulpinoidea)	•Depleted Matrix	KLF-SP79	KLF-SP80	Located in the central portion of the AOI. The wetland is located on a hillslope within an open herbaceous pasture field.
KLF-WETLAND41	PEM	Surface Water Algal Mat or Crust True Aquatic Plants Oxidized Rhizospheres on Living Roots Geomorphic Position FAC-Neutral Test	•common fox sedge (<i>Carex vulpinoidea</i>) •Frank's sedge (<i>Carex frankii</i>)	•Depleted Matrix •Loamy Gleyed Matrix	KLF-SP81	KLF-SP80	Located in the central portion of the AOI. The wetland is located in an open herbaceous valley bottom pasture field.
KLF-WETLAND42	PEM	Oxidized Rhizospheres on Living Roots Geomorphic Position FAC-Neutral Test	•lesser poverty rush (Juncus tenuis)	•Depleted Matrix	KLF-SP83	KLF-SP86	Located in the central portion of the AOI. The wetland is located in an open herbaceous valley bottom pasture field.
KLF-WETLAND43	PEM	Oxidized Rhizospheres on Living Roots Geomorphic Position FAC-Neutral Test	•large barnyard grass (Echinochioa crus-galli) •common fox sedge (Carex vulpinoidea)	•Depleted Matrix	KLF-SP84	KLF-SP85	Located in the northwest portion of the AOI. The wetland is located in an open herbaceous valley bottom pasture field.

FIGURE 1

USGS TOPOGRAPHIC MAP

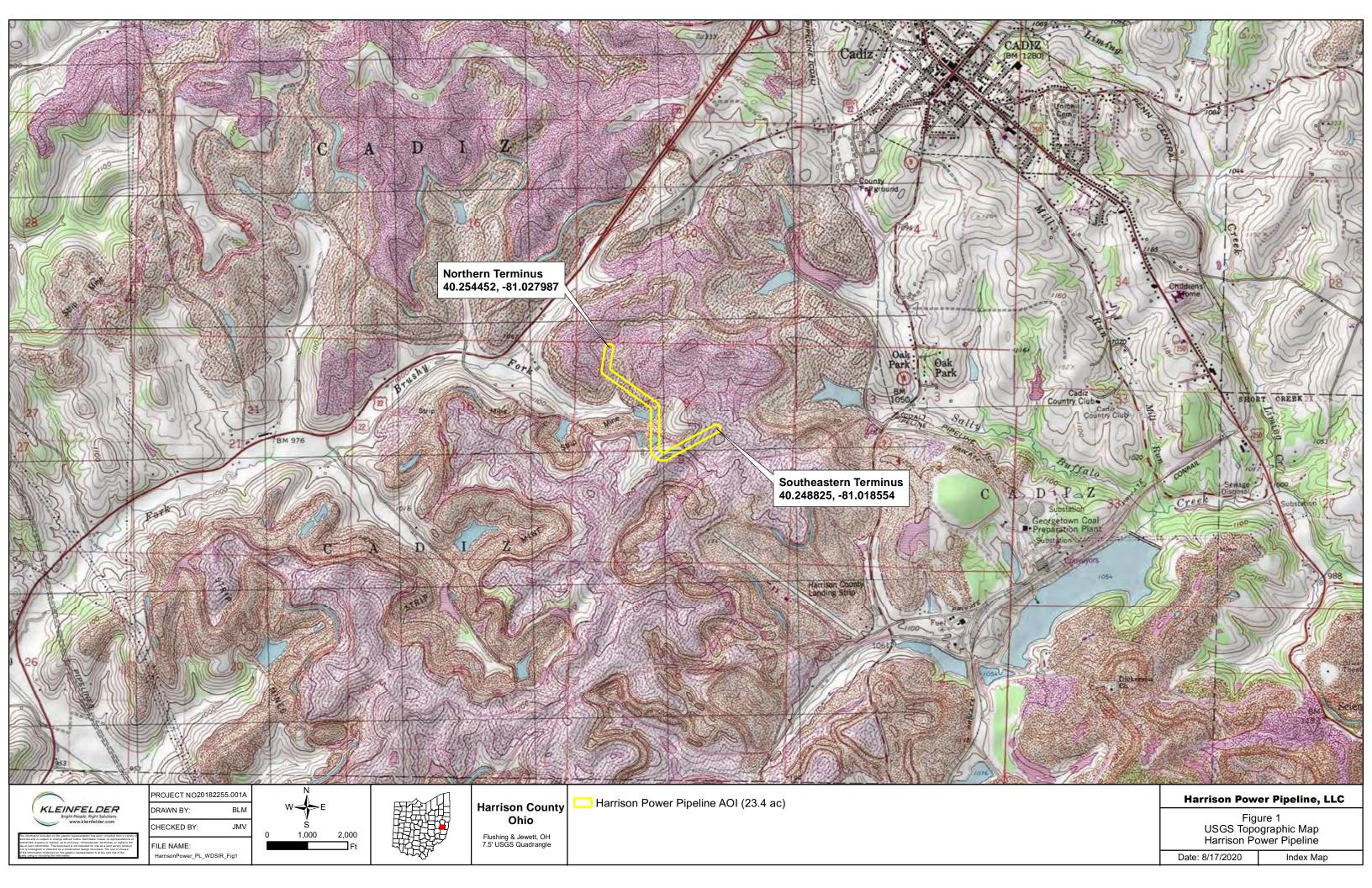
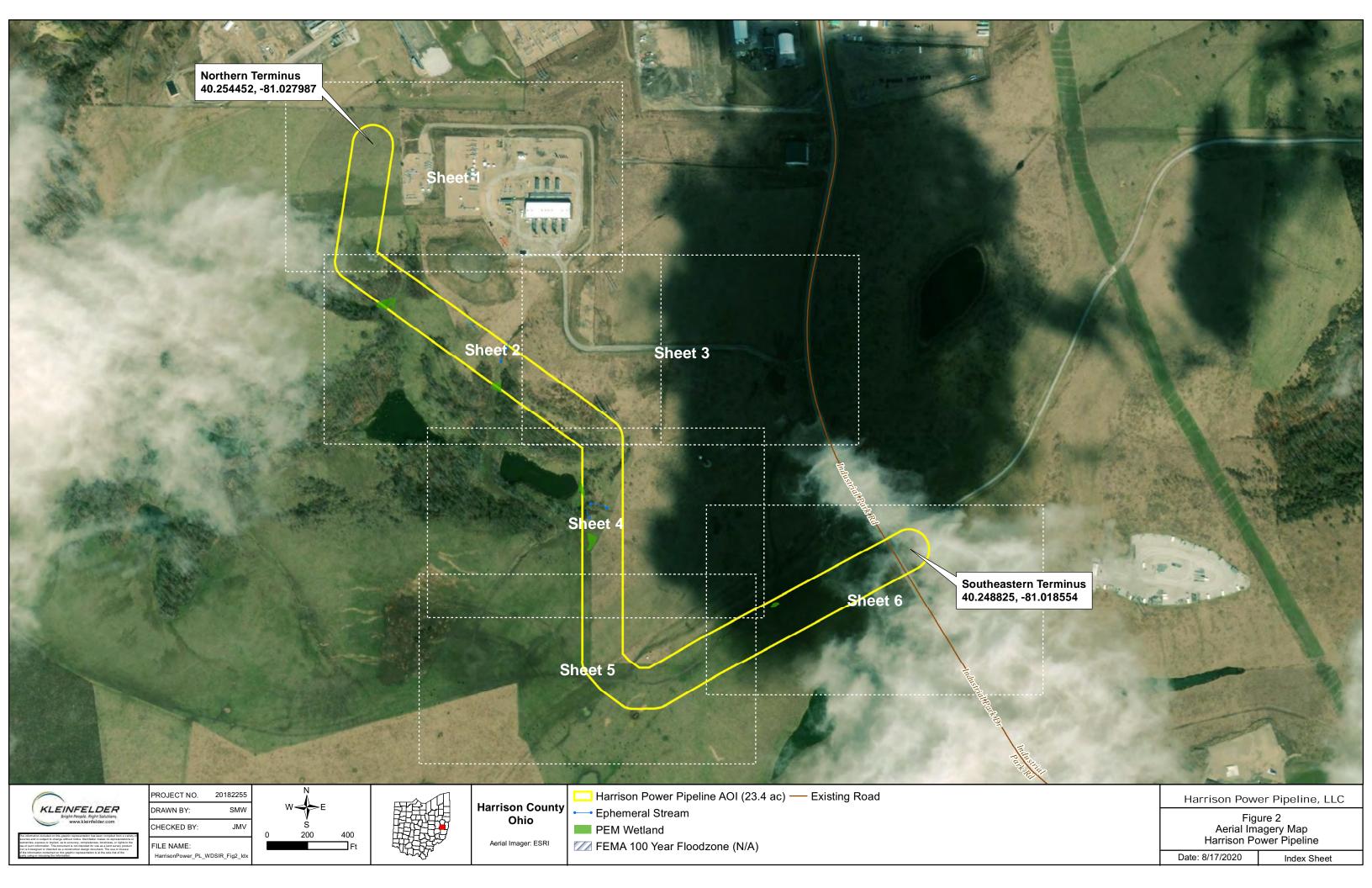
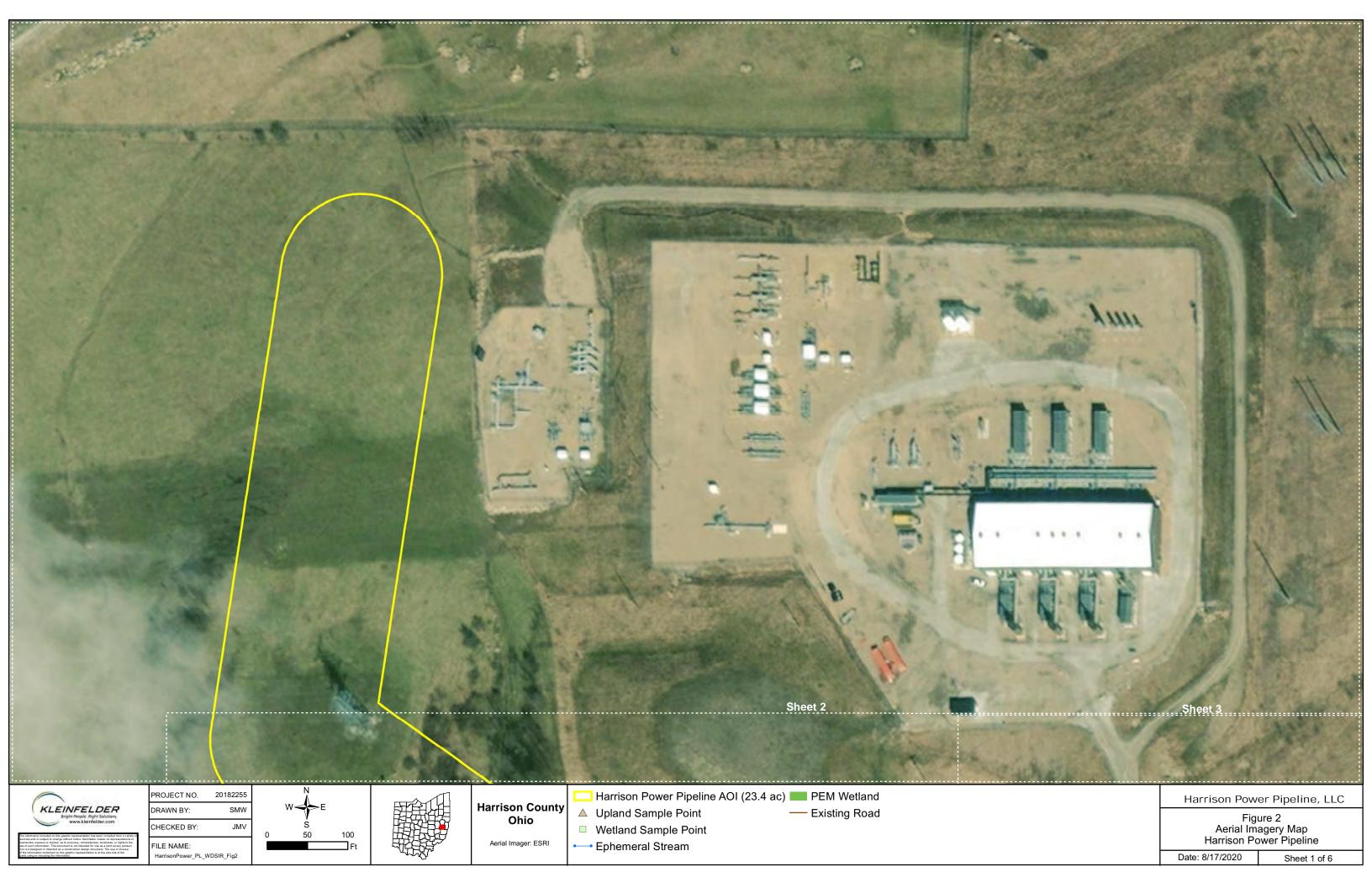
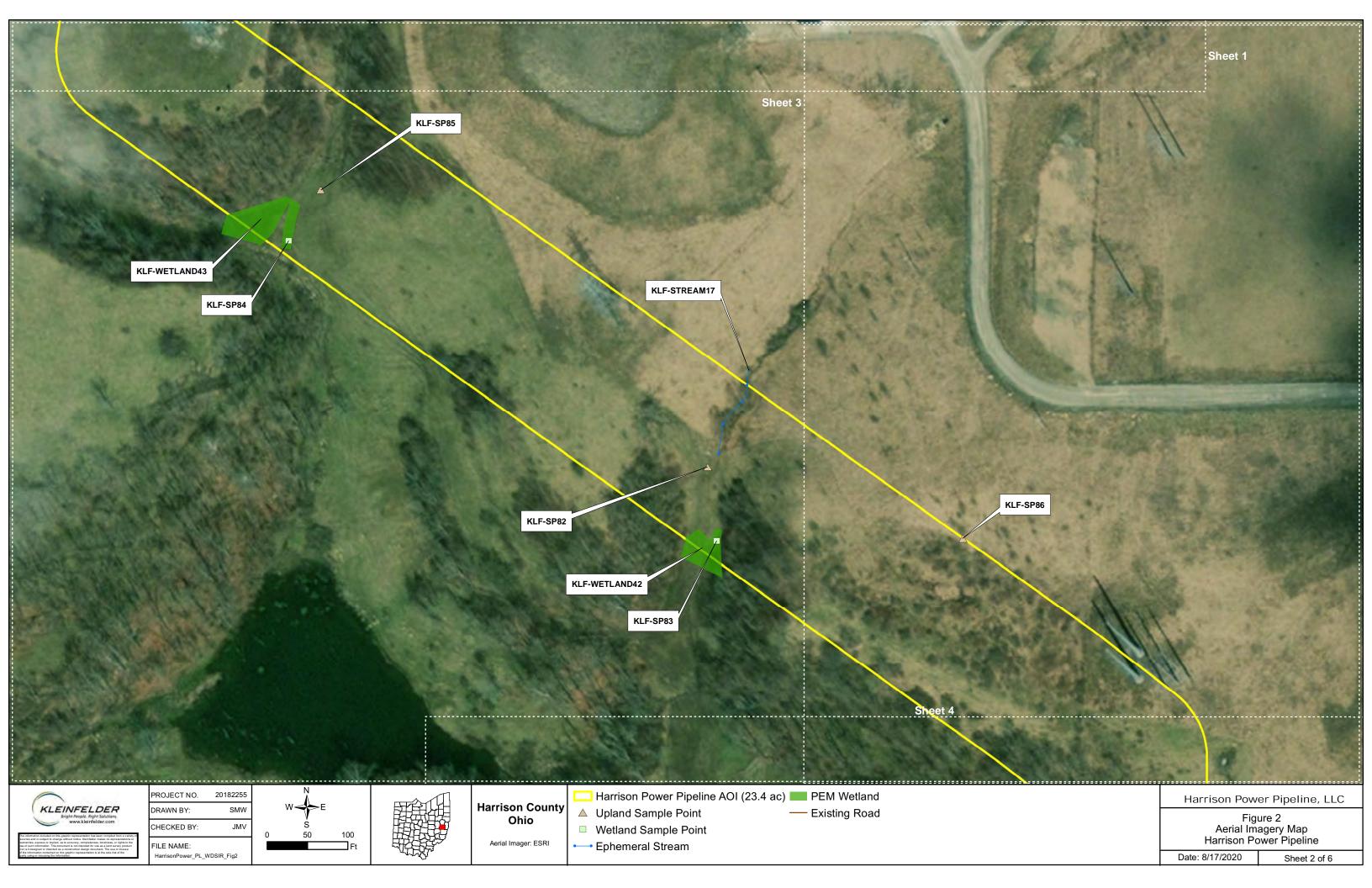


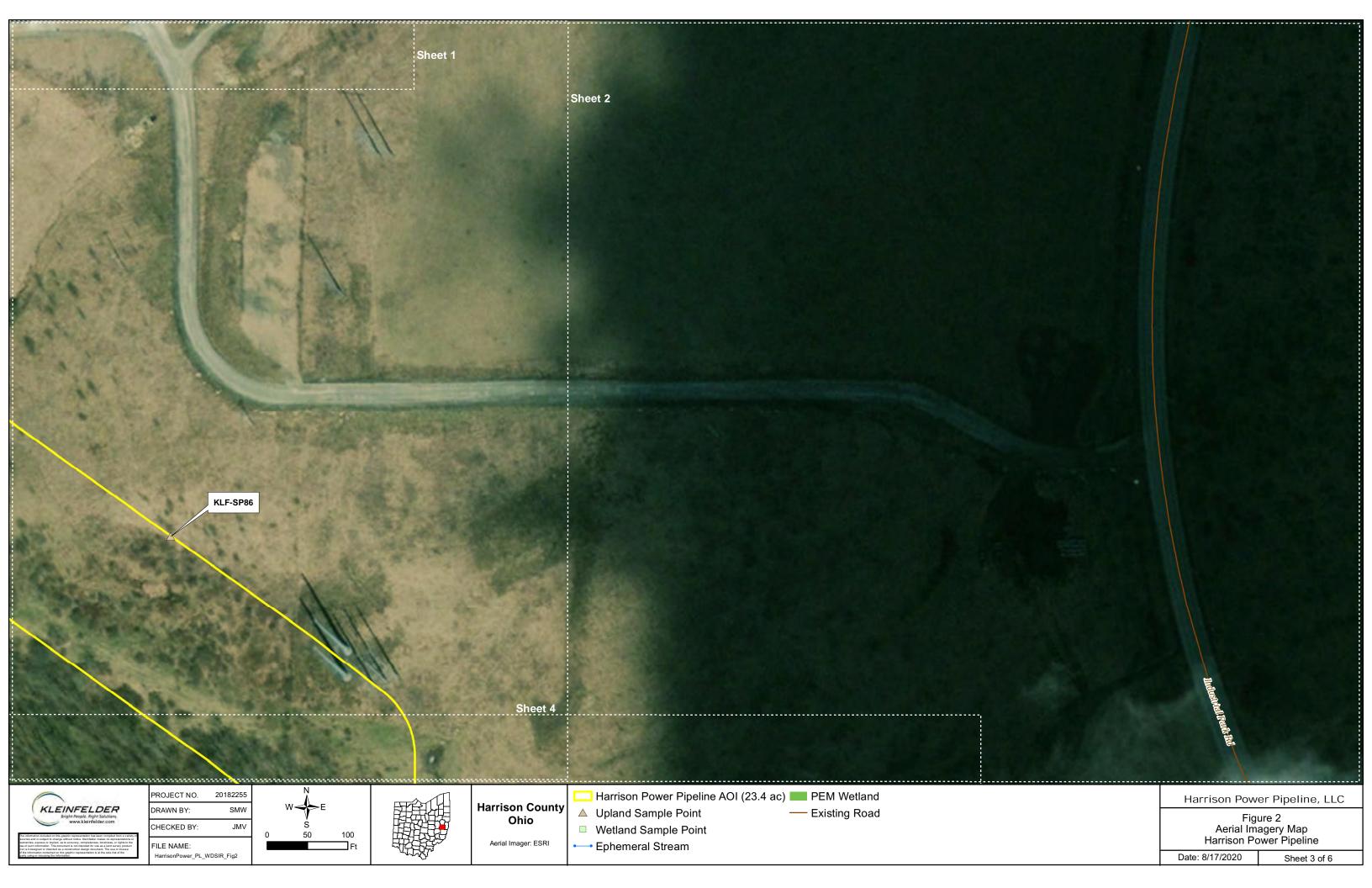
FIGURE 2

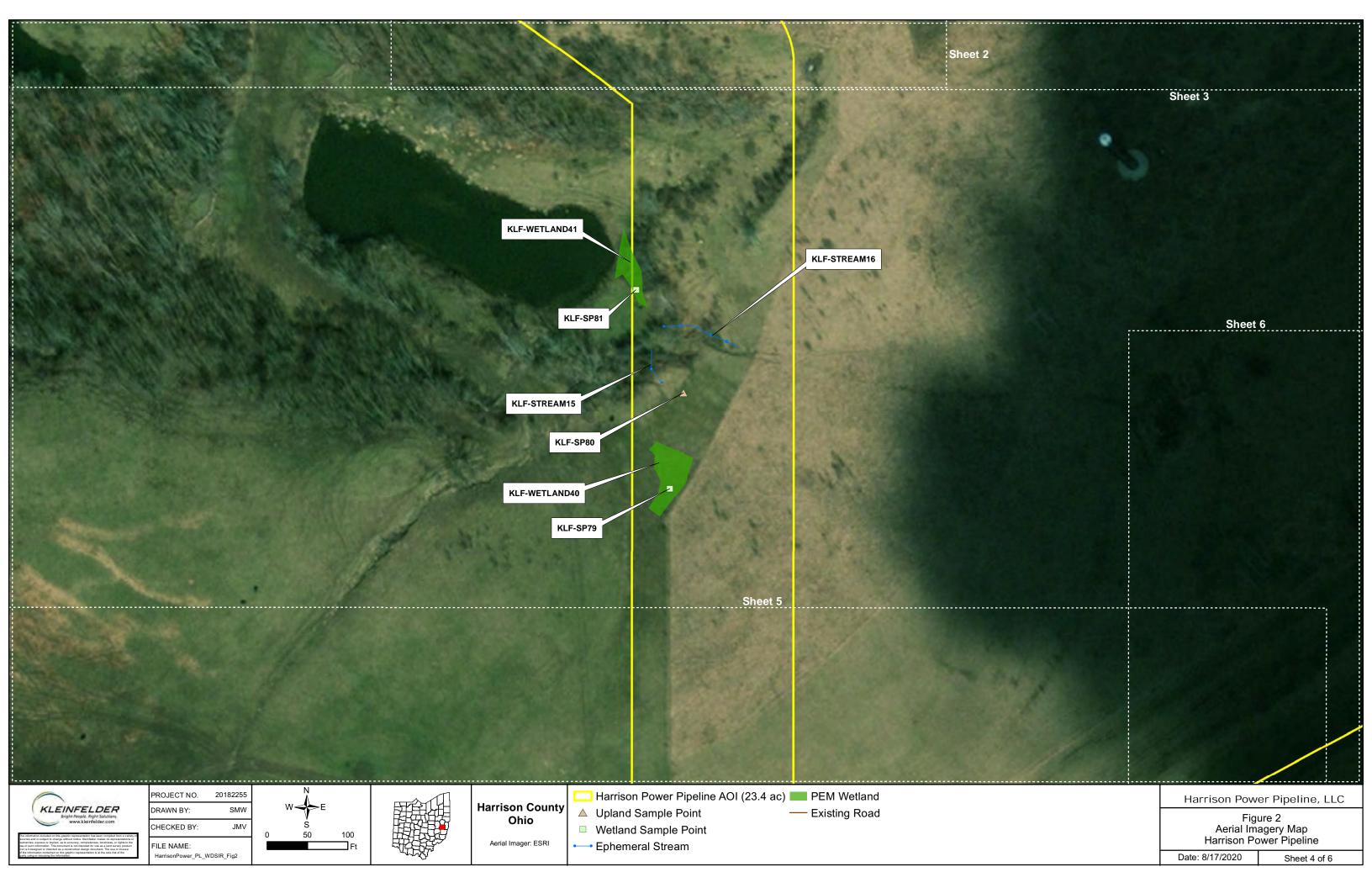
AERIAL IMAGERY MAP

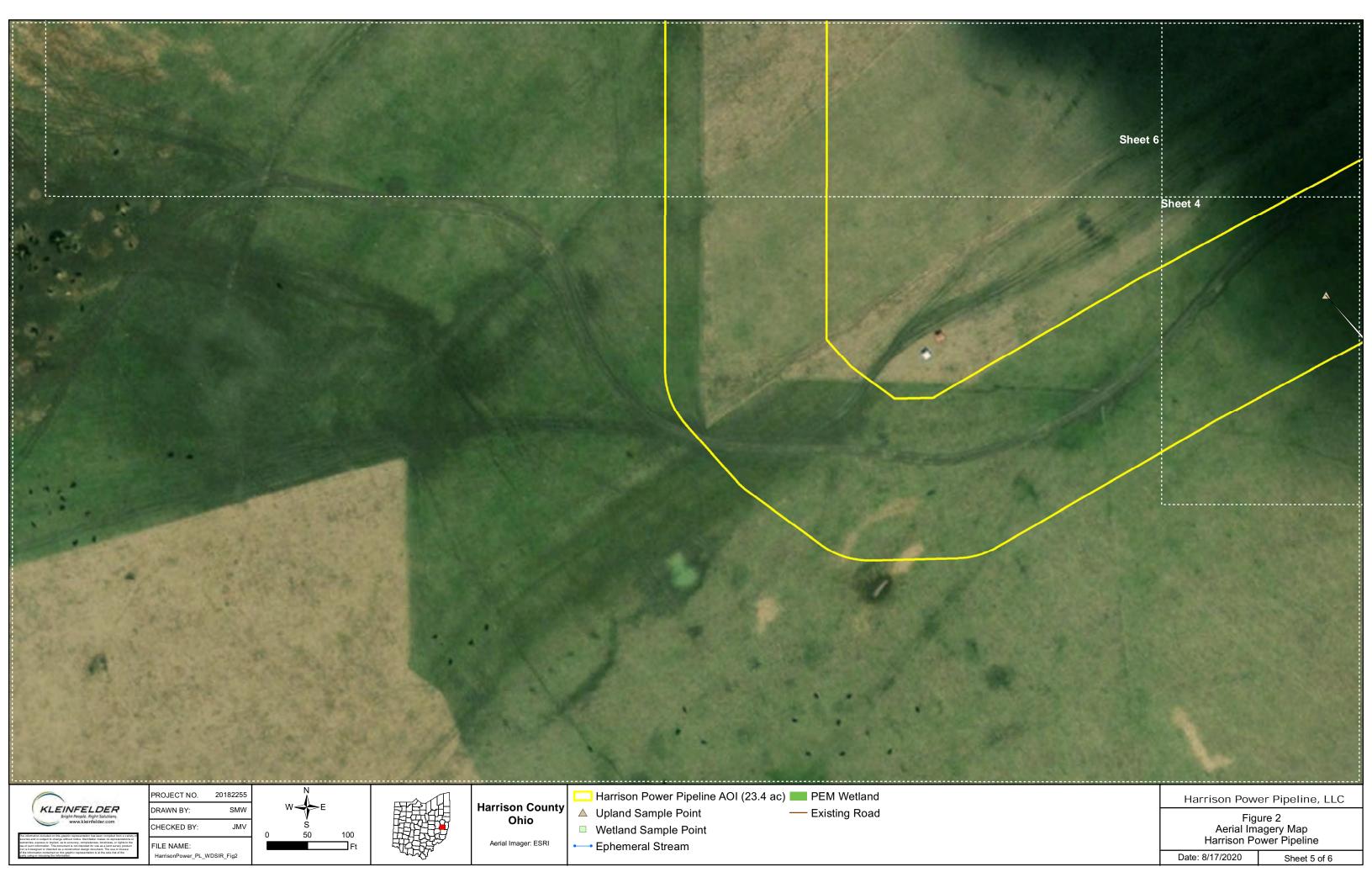


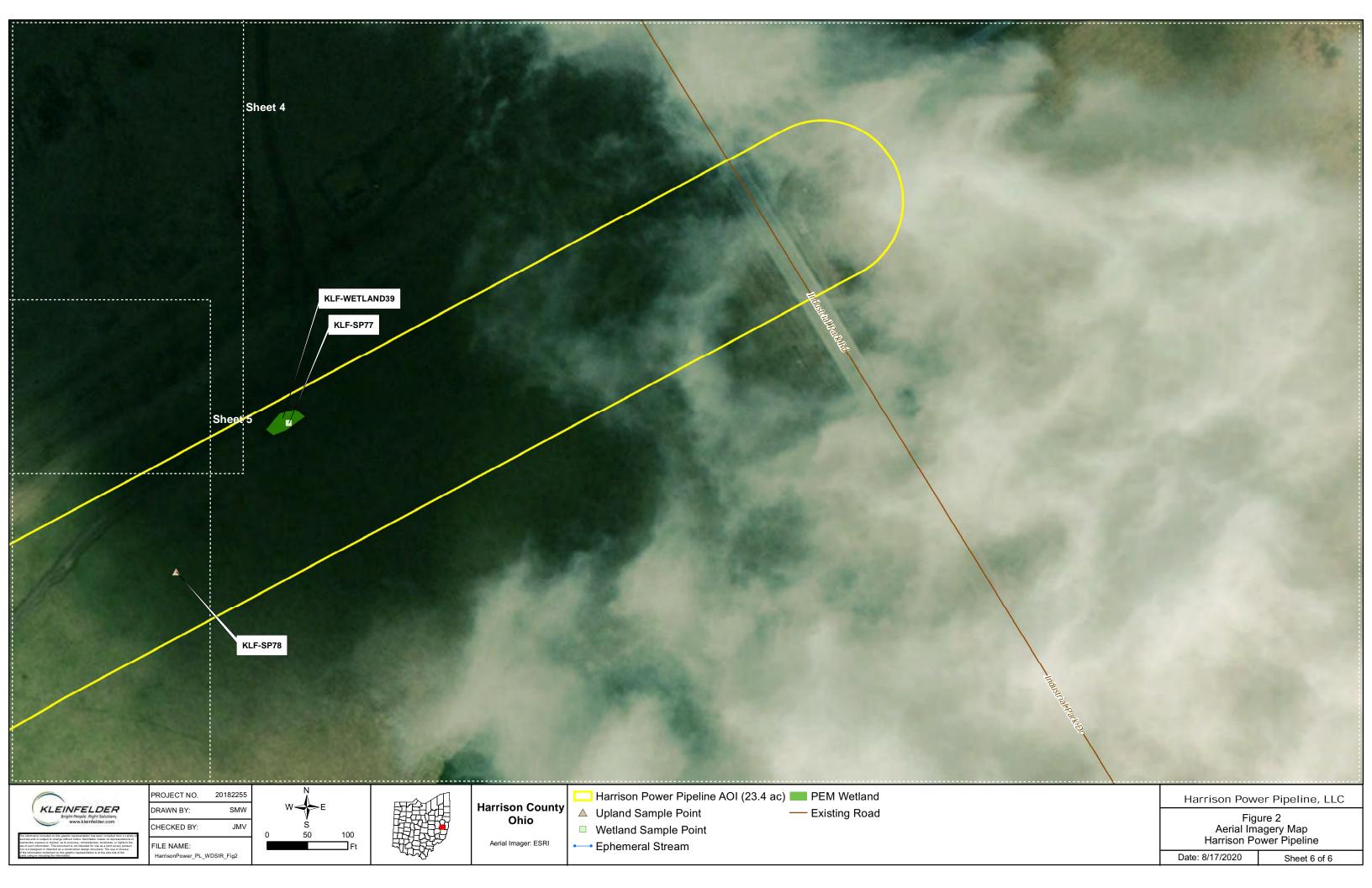












ATTACHMENT A

USACE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Harrison Power Pipeline	Э		Sampling Date: 7/23/20						
Applicant/Owner: Harrison Power Pi	Sampling Point: KLF-SP77								
Investigator(s): John Lewis / Kaitlyn Kiehart Section, Township, Range: 009, 10N, 5W									
Landform (hillslope, terrace, etc.): Fl	_andform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 3								
Subregion (LRR or MLRA): LRR N									
Soil Map Unit Name: Morristown cha	Lat innery silty clay loam,	0 to 8 percent slopes,	stony	NIM/L planeifin	ation: N/A				
Are climatic / hydrologic conditions or					-				
Are Vegetation, Soil,				Circumstances" p	resent? Yes No				
Are Vegetation, Soil,	or Hydrology	naturally problematic?	(If needed, e	explain any answe	rs in Remarks.)				
SUMMARY OF FINDINGS –	Attach site map	showing sampling	ng point location	ns, transects	, important features, etc.				
Hydrophytic Vegetation Present?	Yes N	١٥							
Hydric Soil Present?	Yes V	, is t	he Sampled Area nin a Wetland?	Vos V	No				
Wetland Hydrology Present?		10	iiii a welland:	163	NO				
Remarks:		L							
This sample point is representative or reclaimed strip-mine area that is not overgrazing; therefore normal circum	v used as a pasture fi	eld. The area seems to							
HYDROLOGY									
Wetland Hydrology Indicators:				Secondary Indica	tors (minimum of two required)				
Primary Indicators (minimum of one	is required; check all	that apply)		Surface Soil	Cracks (B6)				
Surface Water (A1)		e Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)		drogen Sulfide Odor (C		Drainage Pat	·				
Saturation (A3)		dized Rhizospheres on	• , ,	Moss Trim Li	· · · ·				
Water Marks (B1)		sence of Reduced Iron			Water Table (C2)				
Sediment Deposits (B2)		cent Iron Reduction in T	rilled Solls (Cb)	Crayfish Burr					
☐ Drift Deposits (B3) ✓ Algal Mat or Crust (B4)		n Muck Surface (C7) er (Explain in Remarks	•1		sible on Aerial Imagery (C9) ressed Plants (D1)				
Iron Deposits (B5)	0"	ci (Explain in Nomana	·)	✓ Geomorphic	· · ·				
Inundation Visible on Aerial Ima	agery (B7)			Shallow Aqui	· ·				
Water-Stained Leaves (B9)	290.7 (2.7			Shallow Aquitard (D3) Microtopographic Relief (D4)					
Aquatic Fauna (B13)				FAC-Neutral	` '				
Field Observations:									
Surface Water Present? Yes	No De	epth (inches):							
Water Table Present? Yes	No 🖍 De	epth (inches):							
	No 🗸 De	epth (inches):	Wetland H	lydrology Presen	t? Yes 🔽 No				
(includes capillary fringe) Describe Recorded Data (stream ga	auge, monitoring well,	aerial photos, previous	inspections), if ava	ilable:					
, -			,						
Remarks:									
Multiple indicators of wetland hydrol	ogy were present at tr	ne time of the investigat	tion.						
T. Control of the Con									

VEGETATION (Four Strata) – Use scientific names of plants.

<u>Free Stratum</u> (Plot size: <u>5' Radius</u>)	Absolute	Dominant		Dominance Test worksheet:
ree Stratum (Plot size: 5' Radius) N/A	% Cover	Species?	Status	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
				Bassalan as la descuentata de la constanta de
				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
5! Dadius	0	= Total Cove	er	OBL species x 1 =
apling/Shrub Stratum (Plot size: 5' Radius)				FACW species x 2 =
N/A				FAC species x 3 =
				FACU species x 4 =
				UPL species x 5 =
				Column Totals: (A) (B)
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				✓ 1 - Rapid Test for Hydrophytic Vegetation
<u>-</u>				2 - Dominance Test is >50%
0				3 - Prevalence Index is ≤3.0¹
	0	= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supportin
<u>Herb Stratum</u> (Plot size: 5' Radius)				data in Remarks or on a separate sheet)
Grass sp.	50	N/A	N/A	Problematic Hydrophytic Vegetation ¹ (Explain)
Eleocharis obtusa	35	Yes	OBL	
Xanthium strumarium	15	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
·				be present, unless disturbed or problematic.
-				Definitions of Four Vegetation Strata:
·				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
				more in diameter at breast height (DBH), regardless of height.
				neight.
				Sapling/Shrub – Woody plants, excluding vines, less
0.		·		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
1				THY COM.
2.				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size: 5' Radius) N/A		. 0.0		Woody vine – All woody vines greater than 3.28 ft in height.
·				
-				Hydrophytic
·				Vegetation Present? Yes No
	0	= Total Cove		Present? Yes No
		. 5.3. 557		
Remarks: (Include photo numbers here or on a separat	,		01	alata da a como esta de casa de casa de la como de casa
he parameters for hydrophytic vegetation were met at t etland boundary. A grass species could not be identifi				plot sizes were reduced to only include species within the

Sampling Point: KLF-SP77

SOIL

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirn	n the abser	nce of indicators.)
Depth	Matrix		Redo	x Feature	<u>s</u>			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 4/1	95	10YR 5/8	5	С	PL	SiL	
10+								Rock/Gravel Refusal
	-		·		· ·	·	· 	
			·					
		-				·		
			· 					
	-							
	-		·		· ·	·	· -	
	-		·			. —		
		letion, RN	1=Reduced Matrix, M	S=Masked	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Ind	dicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (N	/ILRA 147,	148)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	ırface (S9) (MLRA 1	147, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix ((F2)			Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark				_	Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Da					Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre		,			
	lucky Mineral (S1) (I	LRR N,	Iron-Mangan		ses (F12) (LRR N,		
	147, 148)		MLRA 13	-	(BAL D. 4.0		3	
	sleyed Matrix (S4)		Umbric Surfa					Indicators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo			-	-	wetland hydrology must be present,
	Matrix (S6)		Red Parent I	viateriai (F	-21) (MLR	A 127, 14	<i>(</i>)	unless disturbed or problematic.
	_ayer (if observed):							
Type: N/								.,
Depth (inc	ches): N/A						Hydric S	Soil Present? Yes No
Remarks: Th	e parameters for hy	dric soil w	ere met at the time of	the inves	tigation. N	Multiple atte	empts were	made to excavate beyond 10", each attempt
	sulting in rock refusa				Ü	•	•	,

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Harrison Power	plicant/Owner: Harrison Power Pipeline City/County: Harrison County Sampling Date: 07/23/2020 State: OH Sampling Point: KLF-SP7								
Applicant/Owner: Harrison Po	wer Pipeline, LLC	State: OH	Sampling Point: KLF-SP78						
Investigator(s): Kaitlyn Kiehar	Investigator(s): Kaitlyn Kiehart and John Lewis Section, Township, Range: Cadiz								
Landform (hillslope, terrace, e					Slone (%): 3				
Culturation (Innoispe, terrase, e	RR N	40.247595	81.	021477					
Subregion (LRR or MLRA): L Soil Map Unit Name: Morristo	wn channery silty c	Lat:	Long:		Datum:				
Are climatic / hydrologic condi									
Are Vegetation, Soil _	, or Hydrology	y significantly distur	bed? Are "Normal	l Circumstances" pr	esent? Yes No				
Are Vegetation, Soil _	, or Hydrology	y naturally problema	atic? (If needed, e	explain any answers	in Remarks.)				
SUMMARY OF FINDIN	GS – Attach s	ite map showing sam	pling point location	ons, transects,	important features, etc.				
Hydrophytic Vegetation Pres	eont? Voc	No							
Hydric Soil Present?	Ves	No V	Is the Sampled Area		🗸				
Wetland Hydrology Present?	Yes	No	within a Wetland?	Yes	_ No				
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicat	ore:			Secondary Indicate	ors (minimum of two required)				
		check all that apply)		-					
Surface Water (A1)	Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)								
Surface Water (A1)									
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)									
Saturation (A3) Shall be sometimes on Elving Roots (B3) Moss Thin Ellies (B10) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)									
Water Marks (81) Presented of Reduction in Tilled Soils (C6) Crayfish Burrows (C8)									
Drift Deposits (B3)									
Algal Mat or Crust (B4)		Stunted or Stressed Plants (D1)							
Iron Deposits (B5)				Geomorphic Position (D2)					
Inundation Visible on Ae	,			Shallow Aquita					
Water-Stained Leaves (В9)				hic Relief (D4)				
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)				
Field Observations:	V.	Positiv (Santana)							
Surface Water Present?		Depth (inches):							
Water Table Present?		Depth (inches):		hadaalaaa Baaaaa	0 V N- V				
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	wetland i	Hydrology Present	? Yes No				
Describe Recorded Data (str	eam gauge, monito	oring well, aerial photos, pre	vious inspections), if ava	ilable:					
Remarks:	_								
No indicators of wetland hydrometric control in the	ology were present	t at the time of the investigat	tion.						
		g							

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	Sampling Point: KLF-SP78 Dominance Test worksheet:
Free Stratum (Plot size: 30' Radius)	% Cover	Species?	Status	Number of Dominant Species
. N/A				That Are OBL, FACW, or FAC: 0 (A)
				Total Number of Dominant
l				Species Across All Strata: 3 (B)
l <u> </u>				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
S				
7				Prevalence Index worksheet:
3				Total % Cover of: Multiply by:
	_	= Total Cov		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' Radius		rotal cov	.	FACW species x 2 =
N/A				FAC species x 3 =
2				FACU species x 4 =
i.				UPL species x 5 =
l				Column Totals: (A) (B)
·				(-)
				Prevalence Index = B/A =
)				Hydrophytic Vegetation Indicators:
<u>, </u>				1 - Rapid Test for Hydrophytic Vegetation
3			-	2 - Dominance Test is >50%
)				3 - Prevalence Index is ≤3.0 ¹
0				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5' Radius)	0	= Total Cov	er	data in Remarks or on a separate sheet)
Daucus carota	20	Yes	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
Dactylis glomerata	20	Yes	FACU	Trobomato riyaropriyato vogotation (Explain)
3. Trifolium pratense	15	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
Phleum pratense	10	No	FACU	be present, unless disturbed or problematic.
				Definitions of Four Vegetation Strata:
5. Cichorium intybus	10	No	FACU	
S. Cirsium vulgare		No	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
. Lotus corniculatus	5	No	FACU	more in diameter at breast height (DBH), regardless of height.
3				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
1				,
2.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
	85	= Total Cov	er	or size, and woody plants loss than 6.25 it tall.
Noody Vine Stratum (Plot size: 30' Radius)				Woody vine – All woody vines greater than 3.28 ft in
. <u>N/A</u>				height.
<u>. </u>				
3				
l <u>.</u>				
5				Hydrophytic
				Vegetation Present? Yes No
5.	0	= Total Cov		1105CHL: 105 110

Sampling Point: KLF-SP78

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the inc	dicator o	r confirm	the abs	sence of indicato	rs.)	
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remarks	
0-1	7.5YR 3/2	100					SiL			
1-4	7.5YR 4/3	100					SiL			
4+		 			-			Gravel/Co	mpacted Fill F	Refusal
										
		 								
							-			
			-							
¹Type: C=Co	oncentration, D=De	oletion. RM=	Reduced Matrix. MS	======================================	and Gra	ins.	² Locatio	n: PL=Pore Linir	ng. M=Matrix.	
Hydric Soil			. toddood maan, m		<u> </u>			Indicators for Pr		dric Soils³:
Histosol			Dark Surface	(S7)					م (MLRA 1) (MLRA 1	
	oipedon (A2)		Polyvalue Be		(S8) (M	LRA 147,	148)		Redox (A16)	,
Black Hi			Thin Dark Su				,	 (MLRA 14		
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F2	2)			Piedmont Flo	odplain Soils	(F19)
	d Layers (A5)		Depleted Ma					(MLRA 13	-	
	ick (A10) (LRR N)		Redox Dark S						Dark Surface	
	d Below Dark Surfac	ce (A11)	Depleted Dar		-7)			Other (Explai	in in Remarks)	
	ark Surface (A12) Mucky Mineral (S1) (I DD N	Redox Depre	, ,	(E12) (I	DD N				
	147, 148)	LKK N,	MLRA 13		(F12) (L	.KK N,				
	Gleyed Matrix (S4)		Umbric Surfa	•	I RA 136	122)		³ Indicators of hy	vdrophytic vea	etation and
	Redox (S5)		Piedmont Flo			-	8)	wetland hydro		
	Matrix (S6)		Red Parent N				-	unless disturb		
Restrictive I	Layer (if observed)	:		·						
Type: N/	A									
	ches): N/A						Hydri	c Soil Present?	Yes	No
Danisation	·						1 -			
The In	e parameters for hy	dric soil wer	e not met at the time	e of the inve	stigation	•				
Mu	ultiple attempts were	e made to ex	cavate beyond 4", e	ach attempt	t resulting	g in refusa	al from g	ravel and compac	ted fill.	
İ			-			_				
İ										
İ										
İ										

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

roject/Site: Harrison Power Pipeline City/County: Harrison County Sampling Date: 7/23/20								
Applicant/Owner: Harrison Po	wer Pipeline, LLC		Sampling Point: KLF-SP79					
Investigator(s): John Lewis / k	Investigator(s): John Lewis / Kaitlyn Kiehart Section, Township, Range: 009, 10N, 5W							
Landform (hillslope, terrace, et					Slone (%). 15			
Subregion (LRR or MLRA): LF								
Soil Map Unit Name: Morristo	wn channery silty c	Lat:	rcent slones, stony		Datum:			
					·			
Are climatic / hydrologic condit								
Are Vegetation, Soil	, or Hydrology	significantl	y disturbed? Are "Norm	ıal Circumstances" p	resent? Yes No			
Are Vegetation, Soil	, or Hydrology	naturally p	roblematic? (If needed	, explain any answer	rs in Remarks.)			
SUMMARY OF FINDIN	GS – Attach si	te map showin	g sampling point locat	ions, transects	, important features, etc.			
Hydrophytic Vegetation Pres	ent? Ves	✓ No						
Hydric Soil Present?		✓ No	is the Sampled Area					
Wetland Hydrology Present?			within a Wetland?	Yes	No			
Remarks:			<u>-</u>					
strip-mine area that is now us overgrazing; therefore normal	ed as a pasture fiel	d. The area seems	tland. The wetland is located to have normalized to this new resent.					
HYDROLOGY								
Wetland Hydrology Indicate				-	tors (minimum of two required)			
Primary Indicators (minimum	of one is required;			Surface Soil (` '			
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8								
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)								
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)								
Water Marks (B1)								
Sediment Deposits (B2)								
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)								
Iron Deposits (B5)		` '	,		Geomorphic Position (D2)			
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqui	` '			
Water-Stained Leaves (E				Microtopographic Relief (D4)				
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:								
Surface Water Present?	Yes No _	Depth (inches	s):					
Water Table Present?	Yes No _	✓ Depth (inche	s):					
Saturation Present?	Yes No _	✓ Depth (inches	s): Wetland	l Hydrology Presen	t? Yes <u>/</u> No			
(includes capillary fringe) Describe Recorded Data (stre	eam gauge, monito	ring well, aerial pho	tos, previous inspections), if a	vailable:				
Remarks: Multiple indicators of wetland	hydrology wore pre	acout at the time of t	ho investigation					
Multiple indicators of wetland	nydrology were pre	sent at the time of t	ne investigation.					

VEGETATION (Four Strata) – Use scientific names of plants.

% Cover		Indicator	Dominance Test worksheet:
	Species?	Status	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
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
^			OBL species x 1 =
<u>U</u> :	= Total Cov	er	FACW species x 2 =
			FAC species x 3 =
			FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			✓ 1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations¹ (Provide support
0	= Total Cov	er	data in Remarks or on a separate sheet)
70	Vac	OBI	Problematic Hydrophytic Vegetation (Explain)
			1 Toblematic Hydrophytic Vegetation (Explain)
			¹ Indicators of hydric soil and wetland hydrology mus
· 			be present, unless disturbed or problematic.
			Definitions of Four Vegetation Strata:
<u> </u>	NO	UPL	
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless
			height.
			Conline/Church Mondy plants avaluating visco less
			Sapling/Shrub – Woody plants, excluding vines, les than 3 in. DBH and greater than or equal to 3.28 ft (
			m) tall.
			Herb – All herbaceous (non-woody) plants, regardle
			of size, and woody plants less than 3.28 ft tall.
100	= Total Cov	er	Woody vine – All woody vines greater than 3.28 ft in
			height.
			Hydrophytic
			Vegetation
			Present? Yes No
0			Present? Yes No
	0 70 15 5 5	0 = Total Cove 0 = Total Cove 70 Yes 15 No 5 No 5 No 100 = Total Cove	0 = Total Cover O

Sampling Point: KLF-SP79

SOIL

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	the absen	ce of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/1	95	10YR 5/8	5	С	PL	SiL	
3-10	10YR 4/1	100		-			SiL	
			· 	-	· 			Rock/Gravel Refusal
10+			. 					Rock/Gravei Refusai
				-				
	-							
	-							
				-				
					·			
	-							
		letion, RN	/I=Reduced Matrix, M	S=Masked	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Inc	licators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	elow Surfa	ice (S8) (N	ILRA 147,	148)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	urface (S9) (MLRA 1	47, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)			Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark					Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Da				_	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre		,			
	lucky Mineral (S1) (I	LRR N,	Iron-Mangan		es (F12) (LRR N,		
	147, 148)		MLRA 13	•	/MI DA 42	C 400\	3	la disease of levelocule, the versatation and
	Sleyed Matrix (S4)		Umbric Surfa Piedmont Flo					Indicators of hydrophytic vegetation and
	ledox (S5) Matrix (S6)		Red Parent I			-	-	wetland hydrology must be present, unless disturbed or problematic.
	_ayer (if observed):		Red Paleliti	viateriai (F	ZI) (WILK	A 121, 141	<u>')</u>	unless disturbed or problematic.
		•						
Type: N/								
. ,	ches): N/A						Hydric S	oil Present? Yes No
Remarks: Th	e parameters for hy	dric soil w	ere met at the time of	the inves	tigation. N	/lultiple atte	empts were	made to excavate beyond 10", each attempt
res	sulting in rock refusa	ıl.						

Project/Site: Harrison Power	Pipeline	City/	County: Harrison County	5	Sampling Date: <u>07/23/2020</u>
Project/Site: Harrison Power Applicant/Owner: Harrison Po	wer Pipeline, LLC			State: OH	Sampling Point: KLF-SP80
Investigator(s): Kaitlyn Kiehar	t and John Lewis				
Landform (hillslope, terrace, e					Slone (%): 3
Landioini (illisiope, terrace, e	RR N	Local 16	eller (coricave, corivex, flor	ne) 024144	Slope (%) NAD83
Subregion (LRR or MLRA):	wn channon ciltu	_ Lat: 40.240204	Long:	024144	Datum:
Soil Map Unit Name: Morristo					
Are climatic / hydrologic condi					
Are Vegetation, Soil _	, or Hydrolog	y significantly distu	urbed? Are "Normal	l Circumstances" pre	esent? Yes No
Are Vegetation, Soil	, or Hydrolog	y naturally problen	natic? (If needed, e	explain any answers	in Remarks.)
SUMMARY OF FINDIN	GS – Attach s	site map showing sa	mpling point location	ons, transects,	important features, etc.
Lludraphytic Vacatation Dros	vent? Vee	No ✓			
Hydrophytic Vegetation Pres Hydric Soil Present?		No V	Is the Sampled Area		4
Wetland Hydrology Present?	Yes	No	within a Wetland?	Yes	_ No
Remarks:					
HADBOLOGA					
HYDROLOGY Westland Hydrology Indicas	orot			Cocondon, Indicate	ora (minimum of two required)
Wetland Hydrology Indicat		: check all that apply)			ors (minimum of two required)
Primary Indicators (minimum	or one is required		(D14)	Surface Soil C	
Surface Water (A1) High Water Table (A2)		True Aquatic Plants Hydrogen Sulfide O		Sparsely vege	etated Concave Surface (B8)
Saturation (A3)			eres on Living Roots (C3)	Moss Trim Line	·
Water Marks (B1)		Presence of Reduce	-	· · · · · · · · · · · · · · · · · · ·	ater Table (C2)
Sediment Deposits (B2)		Recent Iron Reducti		Crayfish Burro	
Drift Deposits (B3)		Thin Muck Surface			ble on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re	emarks)	Stunted or Stre	essed Plants (D1)
Iron Deposits (B5)				Geomorphic P	osition (D2)
Inundation Visible on Ae	erial Imagery (B7)			Shallow Aquita	ard (D3)
Water-Stained Leaves (B9)			Microtopograp	` '
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)
Field Observations:		/			
Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland F	Hydrology Present	? Yes No <u>*</u>
Describe Recorded Data (str	eam gauge, monit	oring well, aerial photos, pr	revious inspections), if ava	ailable:	
Remarks: No indicators of wetland hydr	rology were presen	at at the time of the investig	ation		
Two indicators of welland flydi	ology were presen	it at the time of the investig	ation.		

001 D - 11111	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' Radius) 1. N/A		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
15' Podius	0	= Total Cov	er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' Radius)				FACW species x 2 =
1. N/A				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
10				3 - Prevalence Index is ≤3.0 ¹
10	0	= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5' Radius)		- Total Cov	Ci	data in Remarks or on a separate sheet)
1. Phleum pratense	30	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Trifolium pratense	20	Yes	FACU	
3. Daucus carota	15	Yes	UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Lotus corniculatus	15	Yes	FACU	be present, unless disturbed or problematic.
5. Cichorium intybus	10	No	FACU	Definitions of Four Vegetation Strata:
6. Cirsium arvense	10	No	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Plantago lanceolata	5	No	UPL	more in diameter at breast height (DBH), regardless of
8				height.
9				Sapling/Shrub – Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.	-			, ,
12.				Herb – All herbaceous (non-woody) plants, regardless
· · ·	105	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30' Radius) 1. N/A				Woody vine – All woody vines greater than 3.28 ft in height.
2				
3				
4				
				Hydrophytic
5.				Vegetation Present? Yes No
5				
		= Total Cov	er	100 <u> </u>

Sampling Point: KLF-SP80

SOIL

Histosol (A1) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Peleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Park Surface (S7) Deloted Selow Surface (S8) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Sendy Gleyed Matrix (S4) Seripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: N/A	SiL SiL SiL Rock Refusal Coation: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Portion Public Portion Public Portion Public Portion Public Portion Public Portion Public Portion Public Portion Public Portion Public Portion Public	SiL Rock Refusal Rock Refusal Rock Refusal
Figure: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Figure: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Figure: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Figure: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Figure: C=Concentration, D=Depletion, RM=Reduced Matrix. Indicators for Problematic Hydric Sand Sand Sand Sand Sand Sand Sand Sand	duced Matrix, MS=Masked Sand Grains. Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 122) January Carbon PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) January Carbon PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S7) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Z cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 148, 147) Very Shallow Dark Surface (F1) Depleted Below Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Red Parent Material (F21) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): N/A Hydric Soil Present? Yes No	duced Matrix, MS=Masked Sand Grains. Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Peleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 122) January Elever Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) January Elever Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain in Soils (F19) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain in Soils (F19) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain in Soils (F19) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,**
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,**
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,**
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,**
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,**
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,**
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (S9) (MLRA 147, 148) Depleted Below Dark Surface (S9) (MLRA 147, 148) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Redox (S5) Sirbiged Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strictive Layer (if observed): Type: N/A Depth (inches): N/A Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Loamy Gleyed Matrix, (F2) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Loamy Gleyed Matrix (F3) MLRA 136, 147) Peledmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be present unless disturbed or problematic. No Hydric Soil Present? Yes No	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Below Dark Surface (F13) (MLRA 136, 122) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Below Dark Surface (S1) (MLRA 136, 122) Fiedmont Floodplain Soils (F19) (MLRA 148) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Betrictive Layer (if observed): Type: N/A Depth (inches): N/A Coast Prairie Redox (A16) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Coast Prairie Redox (A16) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Remarks) Piedmont Floodplain Soils (F19) Cother (Explain in Redox Darks Units) Piedmont Floodplain Soils (F1	Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Extrictive Layer (if observed): Type: N/A Depth (inches): N/A Lamy Gleyed Matrix (F2) Depleted Matrix (F2) Matrix (F2) Depleted Matrix (F2) Matrix (F3) Mucky Matrix (F3) Mucky Surface (F6) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Merch Surface (F7) Depleted Dark Surface (F7) Merch Surface (F12) (LRR N, MLRA 136, 122) Mucky Mineral (S1) (LRR N, MLRA 136, 122) Mucky Mineral	Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Piedmont Floodplain Soils (F19) (MLRA 136, 127) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Stratified Layers (A5)	Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present,
	Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present,
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6)	Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) " " " " " " " " " " " " " " " " " "
	Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Strictive Layer (if observed): Type: N/A Depth (inches): N/A MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be present unless disturbed or problematic. Hydric Soil Present? Yes No	MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) "Indicators of hydrophytic vegetation and wetland hydrology must be present,
	Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. estrictive Layer (if observed): Type: N/A Depth (inches): N/A Hydric Soil Present? Yes No	Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. estrictive Layer (if observed): Type: N/A Depth (inches): N/A Hydric Soil Present? Yes No	
Type: N/A Depth (inches): N/A Hydric Soil Present? Yes No	Treat arent waterial (121) (MERA 121, 141)
Type: N/A Depth (inches): N/A Hydric Soil Present? Yes No	
Depth (inches): N/A Hydric Soil Present? Yes No	
	Hydric Soil Present? Yes No
The parameters for hydric soil were not met at the time of the investigation.	
Multiple attempts were made to excavate beyond 4", each attempt resulting in rock refusal.	rate beyond 4", each attempt resulting in rock refusal.

Project/Site: Harrison Power F	ipeline	City/C	ounty: Harrison County	5	Sampling Date: 7/23/20
Project/Site: Harrison Power F Applicant/Owner: Harrison Power	wer Pipeline, LLC			State: OH	Sampling Point: KLF-SP81
Investigator(s): John Lewis / K	aitlyn Kiehart	Section	on, Township, Range: 0	009, 10N, 5W	
Landform (hillslope, terrace, et					Slone (%): 3
Culturation (LDD on MLDA). LR	R N	40.249637	-81.	024347	Glope (70)
Subregion (LRR or MLRA): LR Soil Map Unit Name: Morristov	vn channery silt loa	m 25 to 70 percent slopes	Long: _ - · ·		Datum:
Are climatic / hydrologic condit					
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal	l Circumstances" pre	esent? Yes No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed, e	explain any answers	in Remarks.)
SUMMARY OF FINDING	GS – Attach sit	te map showing sam	pling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Prese	ant? Vac	✓ No			
Hydric Soil Present?		V No	Is the Sampled Area		
Wetland Hydrology Present?	Yes	V No	within a Wetland?	Yes	_ No
Remarks:					
strip-mine area that is now us overgrazing; therefore normal	ed as a pasture field	d. The area seems to have	normalized to this new	land use and does r	
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum	of one is required; of	check all that apply)		Surface Soil C	racks (B6)
✓ Surface Water (A1)		✓ True Aquatic Plants (etated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Ode		Drainage Patte	
Saturation (A3)		✓ Oxidized Rhizosphere	• , ,	Moss Trim Line	
Water Marks (B1)		Presence of Reduced			ater Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		Recent Iron ReductioThin Muck Surface (C		Crayfish Burro	ble on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			essed Plants (D1)
Iron Deposits (B5)		Other (Explain in Nei	nario)	✓ Geomorphic P	
Inundation Visible on Aer	ial Imagery (B7)			Shallow Aquita	
Water-Stained Leaves (E				Microtopograp	` '
Aquatic Fauna (B13)	,			FAC-Neutral T	
Field Observations:					
Surface Water Present?	Yes No _	Depth (inches): 3			
Water Table Present?	Yes No _	✓ Depth (inches):			
Saturation Present?	Yes No _	✓ Depth (inches):	Wetland H	Hydrology Present	? Yes <u>'</u> No
(includes capillary fringe) Describe Recorded Data (stre	eam gauge, monitor	ring well, aerial photos, pre	vious inspections), if ava	ailable:	
Remarks:					
Multiple indicators of wetland	nyarology were pre	sent at the time of the inve	stigation.		

	names of Absolute	Dominant I	ndicator	Sampling Point: KLF-SP Dominance Test worksheet:	
Free Stratum (Plot size: 15' Radius)	% Cover	Species?	Status	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
)				That Are OBL, FACW, or FAC.	(A/D,
				Prevalence Index worksheet:	
<u> </u>				Total % Cover of: Multiply by	<u>:</u>
	•	= Total Cove		OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15' Radius)		10101 0010	•	FACW species x 2 =	
. <u>N/A</u>				FAC species x 3 =	
				FACU species x 4 =	
				UPL species x 5 =	
				Column Totals: (A)	(B)
					` ′
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	1
				2 - Dominance Test is >50%	
)				3 - Prevalence Index is ≤3.0 ¹	
0	0	- Total Cava		4 - Morphological Adaptations ¹ (Provide s	supporting
Herb Stratum (Plot size: 5' Radius)	-	= Total Cove	ſ	data in Remarks or on a separate she	et)
Carex frankii	30	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Ex	plain)
Grass sp.	25	N/A	N/A		
Carex vulpinoidea	25	Yes	OBL	¹ Indicators of hydric soil and wetland hydrolog	gy must
Eupatorium perfoliatum	10	No	FACW	be present, unless disturbed or problematic.	
Scirpus atrovirens	10	No	OBL	Definitions of Four Vegetation Strata:	
5				Tree – Woody plants, excluding vines, 3 in. (7	7.6 cm) or
7.				more in diameter at breast height (DBH), rega	
				height.	
).).				Sapling/Shrub – Woody plants, excluding vir	nes, less
-				than 3 in. DBH and greater than or equal to 3	
0				m) tall.	
1				Herb – All herbaceous (non-woody) plants, re	
2	100	T-1-1-0		of size, and woody plants less than 3.28 ft tall	l.
A L M C C C C C C C C C C C C C C C C C C	100	= Total Cove	r	Woody vine – All woody vines greater than 3	.28 ft in
Woody Vine Stratum (Plot size: 13 Naulus)				height.	
. N/A					
. <u>N/A</u> 2.					
. N/A 2. 3.					
1. N/A 2. 3. 4.				Hydrophytic	
3				Vegetation	
. N/A 2. 3.		= Total Cove			-

SOIL

Profile Desc	cription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	the absence	e of indicato	rs.)	
Depth	Matrix		Red	ox Feature	<u>s</u>					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-4	10YR 4/2	90	10YR 5/8	10	С	PL	SiL	Blackened	Organics Ob	served
4-20	10Y 4/1	85	7.5YR 4/6	15	С	M	SiL	Blackened	Organics Ob	served
		_								
							-			
		_				·				
			-		· 					
						<u> </u>				
1- 0.0						 	2, ,,			
Hydric Soil		pletion, RN	1=Reduced Matrix, M	IS=Maske	d Sand Gr	ains.	Location: I	PL=Pore Linin	g, M=Matrix. oblematic Hy	dria Saila³,
-			D 10 f	(07)					_	
Histosol			Dark Surfac		(00) (AL DA 447			(10) (MLRA 1 4	1 7)
	oipedon (A2)		Polyvalue B				148)	Coast Prairie		
	stic (A3) en Sulfide (A4)		Thin Dark S ✓ Loamy Gley			147, 140)		(MLRA 14	7, 146) odplain Soils (E10\
	d Layers (A5)		✓ Depleted Ma		(12)		_	(MLRA 13		119)
	uck (A10) (LRR N)		Redox Dark	, ,	F6)			•	Dark Surface	(TF12)
	d Below Dark Surfac	ce (A11)	Depleted Da					•	n in Remarks)	,
	ark Surface (A12)	, ,	Redox Depr		. ,		_	` '	,	
Sandy M	Mucky Mineral (S1) (LRR N,	Iron-Manga	nese Mass	es (F12) (LRR N,				
MLRA	A 147, 148)		MLRA 1	36)						
	Gleyed Matrix (S4)		Umbric Surf						drophytic veg	
	Redox (S5)		Piedmont Fl			-			ogy must be p	
	Matrix (S6)		Red Parent	Material (F	-21) (MLR	A 127, 147	7) u	nless disturbe	ed or problema	atic.
Restrictive I	Layer (if observed)):								
Type: N/	Ά									
Depth (inc	ches): N/A						Hydric So	il Present?	Yes	No
Remarks: Th	ne parameters for hy	dric soil w	ere met at the time o	f the inves	tigation					
•••	io paramotoro for fry	uno con w	oro mot at aro anto o		arga arom					

Project/Site: Harrison Power I	Pipeline	City/0	County: Harrison County	5	Sampling Date: 07/23/2020	
Applicant/Owner: Harrison Po	wer Pipeline, LLC				Sampling Point: KLF-SP82	
Project/Site: Harrison Power Pipeline Applicant/Owner: Harrison Power Pipeline, LLC Applicant/Owner: Harrison Power Pipeline, LLC State: OH Sampling Date: 07/23/20 Sampling Date: 07/23/20 Sampling Date: 07/23/20 Sampling Point: KLF-S Investigator(s): Kaitlyn Kiehart and John Lewis Section, Township, Range: Cadiz						
Landform (hillslope, terrace, et			· · · · · · · · · · · · · · · · · · ·		Slone (%). 3	
Colors size (LDD as MLDA)	RR N	Local rel	ler (concave, convex, none	?5825	Slope (%) NAD83	
Subregion (LRR or MLRA): LF Soil Map Unit Name: Morristo	wn channon cilt loa	m 25 to 70 percent slepes	Long:	.0020	Datum:	
Are climatic / hydrologic condit						
Are Vegetation, Soil	, or Hydrology	significantly distu	rbed? Are "Normal C	Sircumstances" pre	esent? Yes No	
Are Vegetation, Soil	, or Hydrology	naturally problem	atic? (If needed, ex	plain any answers	in Remarks.)	
SUMMARY OF FINDIN	GS – Attach sit	te map showing san	npling point location	ıs, transects,	important features, etc.	
Hydrophytic Vegetation Pres	ent? Yes	No				
Hydric Soil Present?			Is the Sampled Area within a Wetland?	Voc	No	
Wetland Hydrology Present?	Yes	No	within a Wetland:	165		
Remarks: This sample point is represer	ntative of an upland a	area located adjacent to K	LF-WETLAND42 where KL	.F-STREAM17 dis:	sipates.	
HYDROLOGY						
Wetland Hydrology Indicat	ors:		<u>S</u>	Secondary Indicato	ors (minimum of two required)	
Primary Indicators (minimum	of one is required; of	check all that apply)		Surface Soil Ci	racks (B6)	
Surface Water (A1)		True Aquatic Plants	(B14)	Sparsely Vege	tated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)				
Saturation (A3)		Oxidized Rhizospher	res on Living Roots (C3) _	Moss Trim Line	es (B16)	
Water Marks (B1)		Presence of Reduce	d Iron (C4)	Dry-Season W	ater Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction	on in Tilled Soils (C6)	Crayfish Burrov	ws (C8)	
Drift Deposits (B3)		Thin Muck Surface (ble on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Re	marks)	Stunted or Street	essed Plants (D1)	
Iron Deposits (B5)			_	Geomorphic Po	osition (D2)	
Inundation Visible on Ae			_	Shallow Aquita		
Water-Stained Leaves (I	39)		_	Microtopograpl	, ,	
Aquatic Fauna (B13)			<u> </u>	FAC-Neutral To	est (D5)	
Field Observations:		•				
Surface Water Present?		Depth (inches):				
Water Table Present?		Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland Hy	drology Present?	? Yes No	
Describe Recorded Data (str	eam gauge, monitor	ring well, aerial photos, pre	evious inspections), if availa	able:		
Remarks:	rology wore present (at the time of the investige	tion			
No indicators of wetland hydr	ology were present a	at the time of the investiga	IIION.			

<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1. N/A	Absolute	Dominant	Indicator	Dominance Test worksheet:
		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				(i)
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8				OBL species x 1 =
O II (OL LO) (DL) 15' Radius	0	= Total Cove	er	
Sapling/Shrub Stratum (Plot size: 15' Radius 1, N/A				FACW species x 2 =
· ·				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
10	0			4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5' Radius)		= Total Cove	er	data in Remarks or on a separate sheet)
1. Trifolium repens	40	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	20	Yes	FACU	
3. Dactylis glomerata	20	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
4 Lotus corniculatus	- 20 5	No	FACU	be present, unless disturbed or problematic.
5. Cichorium intybus	- 5	No	FACU	Definitions of Four Vegetation Strata:
6. Daucus carota	- 5	No	UPL	
7 Ambrosia artemisiifolia	_ 5	No	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
· ``\			FACU	height.
8				Sanling/Shrub Woody plants evaluding vines loss
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
12				of size, and woody plants less than 3.28 ft tall.
	100	= Total Cove	er	
20' Podius				
Woody Vine Stratum (Plot size: 30' Radius)				Woody vine – All woody vines greater than 3.28 ft in height.
1. N/A	_			
1. N/A 2.				
1. N/A 23				
1. N/A 2 3 4				height. Hydrophytic
1. N/A 2				Hydrophytic Vegetation
1. N/A 2 3 4				height. Hydrophytic

Sampling Point: KLF-SP82

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the inc	dicator o	r confirm	the abs	sence of indicato	ors.)	
Depth	Matrix			 Features 						
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u></u> %	Type ¹	Loc ²	Text	ure	Remarks	
0-4	7.5YR 4/2	100					SiL			
4+								Compacte	ed Clay Refusa	al
	-								-	
	-									
	-									
								 -		
	-									
	•	·					-	 -		
		oletion, RM=	Reduced Matrix, MS	S=Masked S	and Gra	ins.		on: PL=Pore Linin		
Hydric Soil I								Indicators for Pr	_	
Histosol			Dark Surface						A10) (MLRA 1	47)
	pipedon (A2)		Polyvalue Be				148)	Coast Prairie		
Black His			Thin Dark Su			47, 148)		(MLRA 14	•	(=10)
	n Sulfide (A4)		Loamy Gleye		2)				odplain Soils	(F19)
	l Layers (A5) ck (A10) (LRR N)		Depleted Mat Redox Dark S					(MLRA 13	b, 147) Dark Surface	(TE12)
	Below Dark Surfac	·Δ (Δ11)	Depleted Dar						in in Remarks)	
	ark Surface (A12)	C (A11)	Redox Depre		',			Other (Explai	iii iii Keiliaiks)	
	lucky Mineral (S1) (LRR N.	Iron-Mangane	, ,	(F12) (L	.RR N.				
	147, 148)	,	MLRA 130		(· ·-/(-	,				
	leyed Matrix (S4)		Umbric Surfa	•	LRA 13	6, 122)		³ Indicators of hy	drophytic veg	etation and
	edox (S5)		Piedmont Flo			-	l8)	wetland hydrol		
Stripped	Matrix (S6)		Red Parent M	laterial (F21) (MLR	127, 147	7)	unless disturbe	ed or problema	atic.
Restrictive L	ayer (if observed)	:								
Type: Co	mpacted Clay									
Depth (inc	ches): 4"						Hydri	c Soil Present?	Yes	No
Damada		delen en Herren	and and the Con-	a Calle a Carre	- 1 1		1 -			
i tollialite. In	e parameters for hy	dric soil wer	e not met at the time	of the inve	stigation					
Mu	ıltiple attempts were	made to ex	cavate beyond 4", e	ach attempt	t resultin	g in comp	acted cla	ay refusal.		
			•							

Project/Site: Harrison Power F	Pipeline		City/C	County: Harrison County	•	Sampling Date: 7/23/20
Project/Site: Harrison Power F Applicant/Owner: Harrison Po	wer Pipeline, LLC				State: OH	Sampling Point: KLF-SP83
Investigator(s): John Lewis / K	aitlyn Kiehart		Secti	on, Township, Range: _(009, 10N, 5W	_ ,
Landform (hillslope, terrace, et						Slope (%): 3
Subregion (LRR or MLRA). LF	RR N	Lat. 40.251	161	Long: -81	.025790	Datum: NAD83
Subregion (LRR or MLRA): LF Soil Map Unit Name: Morriston	wn channery silt loa	am, 25 to 70 p	ercent slopes	s, bouldery	NIM/L algorific	ation: N/A
Are climatic / hydrologic condit						
Are Vegetation, Soil					ıl Circumstances" p	resent? Yes No
Are Vegetation, Soil	, or Hydrology	/natu	rally problem	atic? (If needed,	explain any answe	rs in Remarks.)
SUMMARY OF FINDIN	GS – Attach si	te map sh	owing san	npling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Prese	ent? Yes	✓ No _				
Hydric Soil Present?	Yes _	✓ No		Is the Sampled Area within a Wetland?	Vos V	No
Wetland Hydrology Present?				within a wetiand:	163	
Remarks:						
This sample point is represen strip-mine area that is now us overgrazing; therefore normal	ed as a pasture fie	ld. The area	seems to hav			what appears to be a reclaimed not exhibit signs of
HYDROLOGY						
Wetland Hydrology Indicate	ors:				Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required;				Surface Soil	` '
Surface Water (A1)			quatic Plants (getated Concave Surface (B8)
High Water Table (A2)			en Sulfide Od		Drainage Pat	
Saturation (A3)		_	•	res on Living Roots (C3)		
Water Marks (B1)			ce of Reduce			Water Table (C2)
Sediment Deposits (B2)				on in Tilled Soils (C6)	Crayfish Burr	` '
Drift Deposits (B3) Algal Mat or Crust (B4)			uck Surface (0 Explain in Rei			sible on Aerial Imagery (C9) ressed Plants (D1)
Iron Deposits (B5)		Outlot (i		nans)	✓ Geomorphic	
Inundation Visible on Ae	rial Imagery (B7)				Shallow Aqui	
Water-Stained Leaves (E						phic Relief (D4)
Aquatic Fauna (B13)	/				✓ FAC-Neutral	
Field Observations:						
Surface Water Present?	Yes No _	✓ Depth	(inches):			
Water Table Present?	Yes No					
Saturation Present?	Yes No				Hydrology Presen	t? Yes 🔽 No
(includes capillary fringe) Describe Recorded Data (stre	oom gauga manita	ring well gori	al photos pro	vious inspections) if av	oilable:	
Describe Recorded Data (str	am gauge, monito	ring well, aen	ai priotos, pre	evious inspections), ii ava	allable.	
Remarks:						
Multiple indicators of wetland	hydrology were pre	esent at the tir	me of the inve	estigation.		

	Absolute	Dominant	Indicator	Sampling Point: KLF-SP83 Dominance Test worksheet:
Free Stratum (Plot size: 30' Radius)	% Cover	Species?	<u>Status</u>	Number of Dominant Species
<u>N/A</u>				That Are OBL, FACW, or FAC: 1 (A)
				Total Number of Dominant
				Species Across All Strata: 1 (B)
		· <u></u>		Devent of Developed Consider
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/
3				,
				Prevalence Index worksheet:
k <u> </u>		· ·	-	Total % Cover of: Multiply by:
	^	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' Radius				FACW species x 2 =
. <u>N/A</u>				FAC species x 3 =
-				FACU species x 4 =
				UPL species x 5 =
·		. <u></u>		Column Totals: (A) (E
i				
5				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
3.				1 - Rapid Test for Hydrophytic Vegetation
)				2 - Dominance Test is >50%
10.				3 - Prevalence Index is ≤3.0 ¹
		= Total Co		4 - Morphological Adaptations ¹ (Provide supporti
Herb Stratum (Plot size: 5' Radius)		- 10tai 00	VCI	data in Remarks or on a separate sheet)
1. Grass sp.	35	N/A	N/A	Problematic Hydrophytic Vegetation ¹ (Explain)
Juncus tenuis	20	Yes	FAC	
Echinochloa crus-galli	15	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
Carex frankii	10	No	OBL	be present, unless disturbed or problematic.
Scirpus atrovirens	5	No	OBL	Definitions of Four Vegetation Strata:
5.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
				more in diameter at breast height (DBH), regardless
7				height.
				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		-		m) tall.
11		· -		Herb – All herbaceous (non-woody) plants, regardles
12	85			of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30' Radius)		= Total Co	ver	Woody vine – All woody vines greater than 3.28 ft in
, N/A				height.
2				
3		· ——		
ł				Hydrophytic
5		· -		Vegetation
	0	= Total Co		Present? Yes No No
5				

SOIL

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	the absen	ce of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	
0-10	10YR 4/2	90	10YR 4/6	10	С	PL	SiL	Blackened Organics Observed
10+								Rock/Gravel Refsual
					· 	· 	-	
			· 		· 		-	
		- ·						
				'				
				-	·			
		-			·		-	
			. <u></u>					
¹ Type: C=Ce	oncentration. D=Der	letion. RN	1=Reduced Matrix, M	S=Maske	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		,	, , , , , , , , , , , , , , , , , , , ,					licators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ace (S8) (N	ILRA 147,	148)	Coast Prairie Redox (A16)
Black Hi			Thin Dark Su	urface (S9) (MLRA 1	147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gley		(F2)			Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ick (A10) (LRR N)	(8.4.4)	Redox Dark					Very Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Da					Other (Explain in Remarks)
	ark Surface (A12) Mucky Mineral (S1) (IDDN	Redox Depre Iron-Mangar	•	,	I DD N		
	147, 148)	LIXIX IN,	MLRA 13		663 (1 12) (LIXIX IV,		
	Gleyed Matrix (S4)		Umbric Surfa	•	(MLRA 13	6. 122)	3	Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6)		Red Parent I			-	-	unless disturbed or problematic.
Restrictive I	Layer (if observed)	:						
Type: N/	A							
Depth (in	ches): N/A						Hydric S	oil Present? Yes No
Remarks: Th		ما المحمد الم		: 4l= = :===	tination N			and to every the bound 10" and attended
111	ie parameters for ny sulting in rock refusa		ere met at the time of	the inves	atigation. iv	iuitipie atte	empts were r	made to excavate beyond 10", each attempt
	5ag 56 66	•••						

Project/Site: Harrison Power	Pipeline		City/County: Harrison County	,	Sampling Date: 7/23/20
Applicant/Owner: Harrison Po	wer Pipeline, LLC				Sampling Point: KLF-SP84
Investigator(s): John Lewis / H			Section, Township, Range:		
Landform (hillslope, terrace, e					Slone (%): 3
Culturation (I DD as MI DA).	RR N	40.252205	-81	.027668	Glope (70)
Subregion (LRR or MLRA): Ll Soil Map Unit Name: Morristo	wn channery silt loa		slones houldery		Datum:
Are climatic / hydrologic condi					
Are Vegetation, Soil _	, or Hydrology	significantly	disturbed? Are "Norma	l Circumstances" pr	esent? Yes No
Are Vegetation, Soil _	, or Hydrology	naturally pro	oblematic? (If needed,	explain any answers	in Remarks.)
SUMMARY OF FINDIN	GS – Attach si	te map showing	sampling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Pres	ent? Yes	✓ No			
Hydric Soil Present?		✓ No	is the Sampled Area	V V	No
Wetland Hydrology Present?		4	within a Wetland?	res	_ NO
Remarks:			·		
strip-mine area that is now us overgrazing; therefore norma	sed as a pasture fiel	d. The area seems to	o have normalized to this new		what appears to be a reclaimed not exhibit signs of
HYDROLOGY					
Wetland Hydrology Indicat				-	ors (minimum of two required)
Primary Indicators (minimum	of one is required;		-	Surface Soil C	` '
Surface Water (A1) High Water Table (A2)		True Aquatic Pl			etated Concave Surface (B8)
Saturation (A3)			espheres on Living Roots (C3)	Drainage Patte Moss Trim Lin	: :
Water Marks (B1)		Presence of Re			/ater Table (C2)
Sediment Deposits (B2)			eduction in Tilled Soils (C6)	Crayfish Burro	· · ·
Drift Deposits (B3)		Thin Muck Surf	face (C7)		ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain	in Remarks)	Stunted or Str	essed Plants (D1)
Iron Deposits (B5)				✓ Geomorphic P	osition (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aquita	` '
Water-Stained Leaves (39)				hic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)
Field Observations:		V			
Surface Water Present?		Depth (inches)			
Water Table Present?		Depth (inches)			
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches)): Wetland	Hydrology Present	? Yes No
	eam gauge, monito	ring well, aerial photo	os, previous inspections), if ava	ailable:	
Remarks: Multiple indicators of wetland	hydrology were pre	sent at the time of th	e investigation		
Multiple indicators of wetland	Trydrology were pre	sent at the time of the	e investigation.		

	Absolute	Dominant	Indicator	Sampling Point: KLF-SP84 Dominance Test worksheet:
Tree Stratum (Plot size: 30' Radius)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
				(N)
		· ——		Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: 2 (B)
1				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
5				Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
3	_			OBL species x1 =
Sapling/Shrub Stratum (Plot size: 15' Radius	0	= Total Cove	er	FACW species x 2 =
. Ν/Δ				FAC species x 3 =
2				FACU species x 4 =
3		·		UPL species x 5 =
l				Column Totals: (A) (B)
5				Prevalence Index = B/A =
S				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
3				
9				✓ 2 - Dominance Test is >50%
10				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5' Radius)				data in Remarks or on a separate sheet)
1. Echinochloa crus-galli	30	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex vulpinoidea	25	Yes	OBL	
3. Juncus tenuis	15	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Rumex crispus	10	No	FAC	be present, unless disturbed or problematic.
5. Scirpus atrovirens	10	No	OBL	Definitions of Four Vegetation Strata:
Grass sp.	5	N/A	N/A	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
Cyperus odoratus	5	No	FACW	more in diameter at breast height (DBH), regardless of
8.				height.
9.		·		Sapling/Shrub – Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
12	100	T-1-1-0		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30' Radius)	100	= Total Cove	er	Woody vine – All woody vines greater than 3.28 ft in
1. N/A				height.
2				
3		· ——		
		·		
				Hydrophytic
5		· ——		Vegetation
6	0			Present? Yes No
	U	= Total Cove	er	

SOIL

Profile Desc	ription: (Describe	to the de	pth needed to docur	ment the	indicator	or confirn	n the absence	e of indicators.)
Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/1	90	10YR 5/8	10	С	PL	SiL	Blackened Organics Observed
4-14	10YR 4/1	95	10YR 5/6	5	С	M	SiL	Blackened Organics Observed
14+								Rock/Gravel Refusal
					_	· ———	· 	
			· .		_		· 	
		-					·	
		-	-					
	-							
		letion, RN	M=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil I			D 10 ((07)				ators for Problematic Hydric Soils ³ :
Histosol	(A1) pipedon (A2)		Dark Surface Polyvalue Be	. ,	000 (89) (8	AI DA 147		2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Black Hi	. , ,		Polyvalde Be				140)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			141, 140)	F	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma		` '		_	(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (F6)			/ery Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Da				_ (Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre		,			
	lucky Mineral (S1) (I \ 147, 148)	LRK N,	Iron-Mangan MLRA 13		ses (F12) (LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa	•	(MI RA 13	86, 122)	³ Inc	licators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent I			-	-	nless disturbed or problematic.
Restrictive I	_ayer (if observed):							
Type: N/	A							
Depth (inc	ches): N/A						Hydric Soil	Present? Yes No
Remarks: Th	e parameters for hy	dric soil w	ere met at the time of	the inves	stigation. M	lultiple atte	mpts were ma	ade to excavate beyond 14", each attempt
	sulting in rock/gravel				Ü		'	, , ,

Project/Site: Harrison Power	Pipeline	City/C	county: Harrison County	5	Sampling Date: <u>07/23/2020</u>
Project/Site: Harrison Power Applicant/Owner: Harrison Po	wer Pipeline, LLC			State: OH	Sampling Point: KLF-SP85
Investigator(s): Kaitlyn Kiehai	rt and John Lewis	Section			
Landform (hillslope, terrace, e			· · · · · · · · · · · · · · · · · · ·		Slone (%): 3
Subragion (LDD or MLDA).	RR N	1 at. 40.252376	L ang81.	027521	
Subregion (LRR or MLRA): L Soil Map Unit Name: Morristo	wn channery silt lo	Lat am. 25 to 70 percent slopes	Long bouldery	.	Datum
Are climatic / hydrologic condi					
Are Vegetation, Soil _	, or Hydrolog	y significantly distur	bed? Are "Normal	Circumstances" pre	esent? Yes No
Are Vegetation, Soil _	, or Hydrolog	y naturally problema	atic? (If needed, e	explain any answers	in Remarks.)
SUMMARY OF FINDIN	IGS – Attach s	ite map showing sam	pling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Pres	cent? Vec	No			
Hydric Soil Present?	Yes	No V	Is the Sampled Area	v	No 🗸
Wetland Hydrology Present?	? Yes	No V	within a Wetland?	Yes	_ NO
Remarks:					
This sample point serves as a gentle hillslope.	a representation of	the upland areas that surro	und KLF-WETLAND43.	The sample point is	located within an open field on
HYDROLOGY					_
Wetland Hydrology Indicat	ors:			Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum	n of one is required;	; check all that apply)		Surface Soil C	racks (B6)
Surface Water (A1)		True Aquatic Plants (B14)	Sparsely Vege	etated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patte	: :
Saturation (A3)			es on Living Roots (C3)	Moss Trim Lin	
Water Marks (B1)		Presence of Reduced			/ater Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Burro	
Drift Deposits (B3) Algal Mat or Crust (B4)		Thin Muck Surface (C Other (Explain in Rer			ible on Aerial Imagery (C9) essed Plants (D1)
Iron Deposits (B5)		Other (Explain in Net	narks)	Geomorphic P	
Inundation Visible on A	erial Imagery (B7)			Shallow Aquita	
Water-Stained Leaves (,			Microtopograp	
Aquatic Fauna (B13)	,			FAC-Neutral T	` '
Field Observations:					
Surface Water Present?	Yes No	Depth (inches):			
Water Table Present?	Yes No	Depth (inches):			
Saturation Present?	Yes No	✓ Depth (inches):	Wetland H	Hydrology Present	? Yes No
(includes capillary fringe) Describe Recorded Data (str	ream gauge monito	oring well aerial photos, pre	vious inspections) if ava	iilahle:	
Docoriso Mocordod Bala (ca	oam gaago, mome	ornig won, donar priotos, pro	vious inspections), ii uva	mable.	
Remarks:					
No indicators of wetland hydrony	cology were present	t at the time of the investiga	tion.		
İ					

To a Object on (D) () 30' Radius	Absolute	Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size: 30' Radius) N/A	<u>% Cover</u>	Species?	Status	Number of Dominant Species		
		· <u></u>		That Are OBL, FACW, or FAC: 0 (A)		
-				Total Number of Dominant		
·				Species Across All Strata: 3 (B)		
k				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: 0 (A/B)		
S				Prevalence Index worksheet:		
<u></u>				Total % Cover of: Multiply by:		
3	_	= Total Cov		OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15' Radius		- Total Cov	6 1	FACW species x 2 =		
N/A				FAC species x 3 =		
				FACU species x 4 =		
3				UPL species x 5 =		
l				Column Totals: (A) (B)		
5				Prevalence Index = B/A =		
				Hydrophytic Vegetation Indicators:		
3				1 - Rapid Test for Hydrophytic Vegetation		
)				2 - Dominance Test is >50%		
0				3 - Prevalence Index is ≤3.0 ¹		
51 D . I'	0	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting		
Herb Stratum (Plot size: 5' Radius)	40		E4.011	data in Remarks or on a separate sheet)		
1. Trifolium repens	40	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
Daucus carota	15	Yes	UPL	The disease of the delice of t		
Prunella vulgaris	15	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Plantago lanceolata	10	No No	UPL	Definitions of Four Vegetation Strata:		
5. Dactylis glomerata		No	FACU			
S. Erigeron annuus	5	No	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of		
Ambrosia artemisiifolia	5	No	FACU	height.		
3. Vernonia noveboracensis	5	No	FACW	Sapling/Shrub – Woody plants, excluding vines, less		
9. -				than 3 in. DBH and greater than or equal to 3.28 ft (1		
10				m) tall.		
11				Herb – All herbaceous (non-woody) plants, regardless		
2	105			of size, and woody plants less than 3.28 ft tall.		
Noody Vine Stratum (Plot size: 30' Radius)	103	= Total Cov	er	Woody vine – All woody vines greater than 3.28 ft in		
N/A				height.		
2	 -					
3.						
i.						
5				Hydrophytic		
5.				Vegetation Present? Yes No		
		= Total Cov		11636HC: 163 HO		

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the inc	dicator o	or confirm	the abs	ence of indicato	rs.)	
Depth	Matrix		Redo	K Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Textu	ire	Remarks	
0-4	10YR 4/2	100					SiCL			
4+								Rock Refu	ısal	_
		 -								_
	-	 .								
							-			
		-								-
		 .								_
		 -								_
		oletion, RM=	Reduced Matrix, MS	S=Masked S	and Gra	ins.		n: PL=Pore Linin		
Hydric Soil	Indicators:						I	Indicators for Pr	oblematic Hyd	dric Soils³:
Histosol	(A1)		Dark Surface	(S7)			_	2 cm Muck (A	A10) (MLRA 1 4	17)
Histic Ep	oipedon (A2)		Polyvalue Be	low Surface	(S8) (M	LRA 147,	148)	Coast Prairie	Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9) (I	MLRA 1	47, 148)		(MLRA 14		
	n Sulfide (A4)		Loamy Gleye	d Matrix (F2	2)		_	Piedmont Flo	odplain Soils (F19)
	d Layers (A5)		Depleted Mat					(MLRA 13		
	ick (A10) (LRR N)		Redox Dark S				-		Dark Surface	(TF12)
	Below Dark Surfac	e (A11)	Depleted Dar		-7)		=	Other (Explai	n in Remarks)	
	ark Surface (A12)	LDDN	Redox Depre		(E40) (1	DD N				
	Mucky Mineral (S1) (LKK N,	Iron-Mangan		(F12) (L	.KK N,				
	A 147, 148) Gleyed Matrix (S4)		MLRA 130 Umbric Surfa	•	I DA 12	2 422\		³ Indicators of hy	drophytic voc	station and
	ledox (S5)		Piedmont Flo			-	6/	wetland hydro		
	Matrix (S6)		Red Parent N			-	-	unless disturb		
	_ayer (if observed)		Red r arent is	iateriai (i Z i) (IVILIX)	1 121, 141	,	uniess distant	ed or problema	ilio.
	ompacted Clay	•								
	-						I leaded at	Cail Bussento	Vaa	No. V
Depth (inc	cnes): 4						Hydric	Soil Present?	Yes	No
Remarks: Th	e parameters for hy	dric soil wer	e not met at the time	of the inve	stigation					
8.4.							-f l			
IVIU	utiple attempts were	made to ex	cavate beyond 4", e	acn attempt	t resultin	g in rock r	erusai.			

Project/Site: Harrison Power I	Pipeline	City/C	ounty: Harrison County		Sampling Date: <u>07/23/2020</u>	
Project/Site: Harrison Power I Applicant/Owner: Harrison Po	wer Pipeline, LLC			State: OH	_ Sampling Point: KLF-SP86	
Investigator(s): Kaitlyn Kiehar	t and John Lewis	Section				
Landform (hillslope, terrace, et			·		Slone (%). 5	
Cubassias (LDD as MLDA).	.c.) RR N	Local reli	er (concave, convex, nor	024698	Slope (%)	
Subregion (LRR or MLRA): LI Soil Map Unit Name: Morristo	wn channery silty cla	v loam 8 to 25 percent slo	Long:		N/A	
Are climatic / hydrologic condit						
Are Vegetation, Soil	, or Hydrology _	significantly distur	bed? Are "Normal	Circumstances" pr	resent? Yes No	
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed, e	explain any answer	s in Remarks.)	
SUMMARY OF FINDIN	GS – Attach site	e map showing sam	pling point location	ns, transects,	important features, etc.	
Hydrophytic Vegetation Pres	ont? Vos	V No				
Hydric Soil Present?	Yes	No V	Is the Sampled Area	.,	No	
Wetland Hydrology Present?	Yes	No	within a Wetland?	Yes	NO	
Remarks:						
This upland sample point is re	epresentative of an h	erbaceous swale within ar	n open field.			
HYDROLOGY						
Wetland Hydrology Indicat	ors:			Secondary Indicat	tors (minimum of two required)	
Primary Indicators (minimum	of one is required; c	heck all that apply)		Surface Soil 0	Cracks (B6)	
Surface Water (A1)		True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Odd	or (C1)	Drainage Patterns (B10)		
Saturation (A3)		Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Lir	nes (B16)	
Water Marks (B1)		Presence of Reduced	I Iron (C4)	Dry-Season V	Vater Table (C2)	
Sediment Deposits (B2)		Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Burro	ows (C8)	
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Ren	narks)	Stunted or Str	ressed Plants (D1)	
Iron Deposits (B5)				Geomorphic F		
Inundation Visible on Ae				Shallow Aquit		
Water-Stained Leaves (I	39)				phic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)	
Field Observations:		v				
Surface Water Present?		Depth (inches):				
Water Table Present?		Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland H	lydrology Present	t? Yes No _	
Describe Recorded Data (str	eam gauge, monitori	ng well, aerial photos, pre	vious inspections), if avai	ilable:		
Remarks:	4 1 1					
One secondary indicator of w	etiand hydrology was	s present at the time of the	e investigation.			

	Absolute	Dominant	Indicator	Sampling Point: KLF-SP86 Dominance Test worksheet:
Free Stratum (Plot size: 30' Radius)	% Cover	Species?	Status	Number of Dominant Species
. N/A				That Are OBL, FACW, or FAC:(A)
				Total Number of Dominant
				Species Across All Strata: (B)
k <u> </u>				
i				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
S				
				Prevalence Index worksheet:
8		<u> </u>		Total % Cover of: Multiply by:
		= Total Cove	<u></u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15' Radius)				FACW species x 2 =
. <u>N/A</u>				FAC species x 3 =
				FACU species x 4 =
i				UPL species x 5 =
				Column Totals: (A) (B)
		·		Prevalence Index = B/A =
7.				Hydrophytic Vegetation Indicators:
				<u>✓</u> 1 - Rapid Test for Hydrophytic Vegetation
3				2 - Dominance Test is >50%
)				3 - Prevalence Index is ≤3.0 ¹
0	_			4 - Morphological Adaptations ¹ (Provide supportin
Herb Stratum (Plot size: 5' Radius)		= Total Cove	er	data in Remarks or on a separate sheet)
Phalaris arundinacea	80	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Barbarea vulgaris	10	No	FACU	
Phleum pratense	10	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
·			-7100	be present, unless disturbed or problematic.
ł				Definitions of Four Vegetation Strata:
5				
ò		<u> </u>		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless o
7				height.
3				October 10 bands - Was also best a control of the control of
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
0				m) tall.
1				Have All have account (non-woods) plants, regardless
2				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
001 D - 411	100	= Total Cove	er	
Noody Vine Stratum (Plot size: 30' Radius)				Woody vine – All woody vines greater than 3.28 ft in
. N/A				height.
<u>. </u>				
3				
l				
5				Hydrophytic Vegetation
S				Present? Yes No
	0	= Total Cove	\r	

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the indi	icator o	r confirm	the abs	ence of indicate	ors.)	
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	<u>%</u> T	ype ¹	Loc ²	Textu	ire	Remarks	
0-6	10YR 5/3	100					SiCL			
6+							'	Rock Ref	usal	
							-			
	-									
							-			<u> </u>
										.
			-							-
										_
	oncentration, D=Dep	oletion, RM=	Reduced Matrix, MS	S=Masked Sa	and Grai	ns.		n: PL=Pore Linir		
Hydric Soil	Indicators:						I	Indicators for Pi	roblematic Hyd	dric Soils³:
Histosol	(A1)		Dark Surface	(S7)			-	2 cm Muck (A10) (MLRA 1 4	17)
Histic Ep	oipedon (A2)		Polyvalue Be	low Surface ((S8) (ML	RA 147,	148)	Coast Prairie	Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su			7, 148)		(MLRA 14		
	en Sulfide (A4)		Loamy Gleye	d Matrix (F2))		_	Piedmont Flo	oodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 13		
	ıck (A10) (LRR N)		Redox Dark S				-		Dark Surface	(TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar		7)		=	Other (Expla	in in Remarks)	
	ark Surface (A12)	1 DD N	Redox Depre	, ,	(E40) (I	DD N				
	Mucky Mineral (S1) (LKK N,	Iron-Mangan		(F12) (L	KK N,				
	A 147, 148) Bleyed Matrix (S4)		MLRA 13	•	DA 126	122\		³ Indicators of h	udrophutio vogo	station and
	Redox (S5)		Piedmont Flo			-	٥/		logy must be p	
	Matrix (S6)		Red Parent N				-		ed or problema	
	Layer (if observed)	•	Neu i alentin	naterial (1 2 1)	(WILKA	121, 141	,	uniess disturb	ed of problema	illo.
Type: N/		•								
							I le calmi a	Cail Duanauto	V	No. V
	ches): N/A						пуапа	Soil Present?	Yes	No
Remarks: Th	e parameters for hy	dric soil were	e not met at the time	e of the inves	tigation.					
8.4.						. :	-f l			
IVIU	ultiple attempts were	e made to ex	cavate beyond 6°, 6	acn attempt	resulting	in rock r	erusai.			

ATTACHMENT B

Ohio Rapid Assessment Method (ORAM) Forms

Background Information

Name: John Lewis

Date: 7/23/2020

Affiliation: Kleinfelder

Address: 51 Dutilh Road, Suite 240 Cranberry Township, PA 16066

Phone Number: 412-848-7376

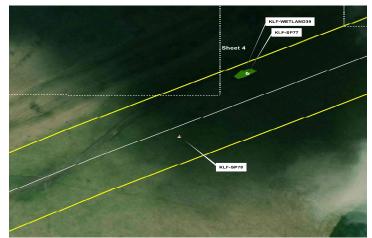
e-mail address: JALewis@kleinfelder.com

Name of Wetland: KLF-WETLAND39

Vegetation Communit(ies): Palustrine Emergent

HGM Class(es): DEPRESS

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



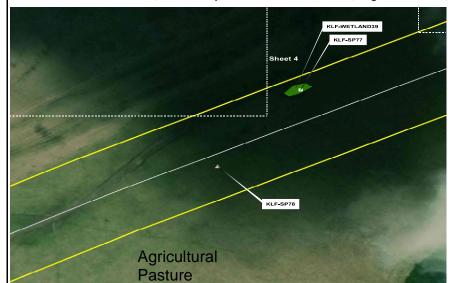


Lat/Long or UTM Coordinate 40.248093, -81.020966	
USGS Quad Name Flushing	
County Harrison	
Township Cadiz	
Section and Subsection Cadiz Township	
Hydrologic Unit Code HUC 050400011402	
Site Visit 07/23/2020	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map N/A	
Soil Survey MoB	
Delineation report/map Previously provided.	

Name of Wetland: KLF-WETLAND39

Wetland Size (acres, hectares): 0.017 acres

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.





KLF-WETLAND39 is a PEM wetland located in Cadiz Township, Harrison County, Ohio. The wetland is located to the west of Industrial Park Road. The wetland is located in a depression and appears to be within a reclaimed strip-mine area that is now used as a pasture field. The area seems to have normalized to this new land use and does not exhibit signs of overgrazing; therefore normal circumstances are considered to be present.

Comments, Narrative Discussion, Justification of Category Changes:

The wetland is located in a depression and appears to be within a reclaimed strip-mine area that is now used as a pasture field.

Final score: 18.5 Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	Х	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	NO Co to Overtion 10
9b	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
90	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
30	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site:	Harris	on Power Pipeline	Rater(s):	John Lewis		Date:7/23/2020
0	0	Metric 1. Wetland A	rea (size)			
max 6 pts.	subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1) 20.2ha) (5 pts) Iha) (4 pts)			
		3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	.2ha) (2pts) <0.12ha) (1 pt)			
1	1	Metric 2. Upland bu	iffers and	surroundi	ng land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use	om (164ft) or more 25m to <50m (82 1e 10m to <25m (3 1e average <10m (<3 1. Select one or d	around wetland per to <164ft) around v 32ft to <82ft) around 32ft) around wetland ouble check and av	rimeter (7) vetland perimeter (4) I wetland perimeter (1) I perimeter (0) erage.	
		LOW. Old field (>10 years MODERATELY HIGH. Re X HIGH. Urban, industrial, o	sidential, fenced p	asture, park, conse	rvation tillage, new fallo	ow field. (3)
9	10	Metric 3. Hydrology		oropping, mining, co	nsudelion. (1)	
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa		3b. (Part of wetland/u	
		Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolog	nly one and assigr) (2)	n score.	Semi- to permane Regularly inunda Seasonally inund X Seasonally satura	• •
		None or none apparent (12) Recovered (7) Recovering (3) 5 Recent or no recovery (1)		rbances observed	point source (non filling/grading road bed/RR trac dredging	
6.5	16.5	Metric 4. Habitat Al	teration a	nd Develo	pment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2)		and average.		
		4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	y one and assign	score.		
		4c. Habitat alteration. Score one or				
1	16.5	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcutti selective	cutting	shrub/sapling ren herbaceous/aqua sedimentation dredging	
QI)	ibtotal this pa	ge	woody de toxic poll	ebris removal utants	farming nutrient enrichme	ent
last revised		~	<u> </u>			

Site:	Harriso	n Power Pipeline	ater(s): John	Lewis	Date: 7/23/2020
	16.5]			
	10.0				
	subtotal first pa	i	41 1 -		
0	16.5	Metric 5. Special We	tianas.		
max 10 pts	s. subtotal	Check all that apply and score as indicated by (40)	ated.		
		Bog (10) Fen (10)			
		Old growth forest (10)			
		Mature forested wetland (5)	stland uprostricted by d	rology (10)	
		Lake Erie coastal/tributary we Lake Erie coastal/tributary we			
		Lake Plain Sand Prairies (Oa	•		
		Relict Wet Prairies (10)			
		Known occurrence state/fede			
		Category 1 Wetland. See Qu		· , ,	
2		Metric 6. Plant comr	nunities, inte	erspersion, microto	pography.
	18.5		•	•	
max 20 pts	s. subtotal	6a. Wetland Vegetation Communities.		Community Cover Scale	474
		Score all present using 0 to 3 scale. Aquatic bed	0	Absent or comprises <0.1ha (0.24) Present and either comprises sm	
		1 Emergent	·	vegetation and is of moderate of	
		0 Shrub		significant part but is of low qua	-
		0 Forest	2	Present and either comprises sign	
		MudflatsOpen water		vegetation and is of moderate of part and is of high quality	luality or comprises a small
		Other	3	Present and comprises significan	t part, or more, of wetland's
		6b. horizontal (plan view) Interspersion		vegetation and is of high quality	· !
		Select only one. High (5)	Narrative De	escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	•
		Low (1) X None (0)		although nonnative and/or distuction also be present, and species	• •
		6c. Coverage of invasive plants. Refer		moderately high, but generally	•
		to Table 1 ORAM long form for list. Ad		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbance tolerant nati absent, and high spp diversity a	• • • • • • • • • • • • • • • • • • • •
		Sparse 5-25% cover (-1)		the presence of rare, threatene	•
		Nearly absent <5% cover (0)			
		Absent (1)	Mudflat and 0	Open Water Class Quality Absent <0.1ha (0.247 acres)	
		6d. Microtopography. Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 acres)	cres)
		O Vegetated hummucks/tussuc	ks 2	Moderate 1 to <4ha (2.47 to 9.88	
		O Coarse woody debris >15cm	` '	High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10in) O Amphibian breeding pools		aphy Cover Scale	
		U Amphibian breeding pools	<u>Microtopogr</u>	Absent	
			1	Present very small amounts or if	more common
				of marginal quality	
			2	Present in moderate amounts, bu quality or in small amounts of h	S .
			3	Present in moderate or greater a	
18.5	\neg			and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0
3	Metric 2. Buffers and surrounding land use		1
	Metric 3. Hydrology		9
	Metric 4. Habitat		6.5
	Metric 5. Special Wetland Communities		0
	Metric 6. Plant communities, interspersion, microtopography		2
	TOTAL SCORE 18.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	_	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	2	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category					
Choose one	Category 1	Category 2	Category 3		

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: John Lewis

Date: 7/23/2020

Affiliation: Kleinfelder

Address: 51 Dutilh Road, Suite 240 Cranberry Township, PA 16066

Phone Number: 412-848-7376

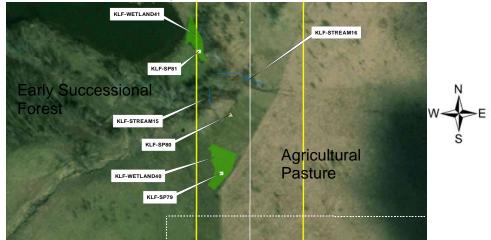
e-mail address: JALewis@kleinfelder.com

Name of Wetland: KLF-WETLAND40

Vegetation Communit(ies): Palustrine Emergent

HGM Class(es): SLOPE

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

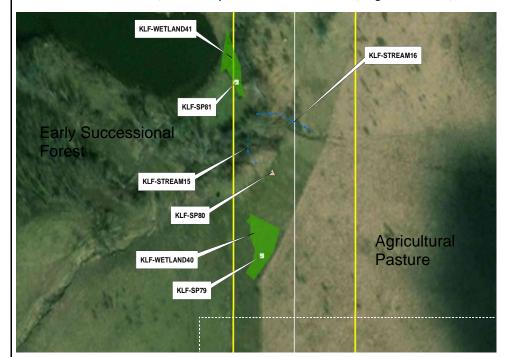


Lat/Long or UTM Coordinate 40.248959, -81.024212	
USGS Quad Name Flushing	
County Harrison	
Township Cadiz	
Section and Subsection Cadiz Township	
Hydrologic Unit Code HUC 050400011402	
Site Visit 07/23/2020	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map N/A	
Soil Survey MoD	
Delineation report/map Previously provided.	

Name of Wetland: KLF-WETLAND40

Wetland Size (acres, hectares): 0.062 acres

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.





KLF-WETLAND40 is a PEM wetland located in Cadiz Township, Harrison County, Ohio. The wetland is located to the west of Industrial Park Road. The wetland is located on a hillslope and appears to be within a reclaimed strip-mine area that is now used as a pasture field. The area seems to have normalized to this new land use and does not exhibit signs of overgrazing; therefore normal circumstances are considered to be present.

Comments, Narrative Discussion, Justification of Category Changes:

The wetland is located on a hillslope and appears to be within a reclaimed strip-mine area that is now used as a pasture field.

Final score: 18.5 Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

			_
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YFS	(NO)
Ju	an elevation less than 575 feet on the USGS map, adjacent to this	1 120	
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
O.D	prevent erosion and the loss of aquatic plants, i.e. the wetland is	123	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		, , , , , , , , , , , , , , , , , , , ,	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.	\/	(10)
9d	Does the wetland have a predominance of native species within its	YES	(NO)
	vegetation communities, although non-native or disturbance tolerant	Mattendia a Catamani	O- 4- O
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		3 Welland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		0 - 1 - 0 1 10	
-10	Lake Blein Cond Breisies (Och Openings) le the wetlend leasted in	Go to Question 10	410
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	(10)
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	Oo to Question in
	several inches of the surface, and often with a dominance of the	o wolland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies	l	
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Occupation Co. 111 11	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site:	Harri	son Power Pipeline	Rater(s):	John Lewis		Date:	7/23/2020
		•					
0	0	Metric 1. Wetland A	rea (size).			
max 6 pts.	subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts					
		25 to <50 acres (10.1 to <2	0.2ha) (5 pts)				
		10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha					
		0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <	2ha) (2pts)				
		<0.1 acres (0.04ha) (0 pts)	, , , ,				
1	1	Metric 2. Upland bu	ffers and	l surroundi	ng land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width.					
		WIDE. Buffers average 50 MEDIUM. Buffers average	25m to <50m (8	2 to <164ft) around v	wetland perimeter (4)		
		NARROW. Buffers averag X VERY NARROW. Buffers					
		2b. Intensity of surrounding land use	. Select one or	double check and av	rerage.		
		VERY LOW. 2nd growth o LOW. Old field (>10 years	r older forest, pra), shrub land, yol	airie, savannan, wiidi ung second growth fo	ire area, etc. (7) orest. (5)		
		MODERATELY HIGH. Re X HIGH. Urban, industrial, o				w field. (3)	
	10	Metric 3. Hydrology	-	о. оррg,g, ос			
9	10						
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5)	apply.	3b.	Connectivity. Score all 100 year floodpla		
		Other groundwater (3)			X Between stream/	lake and oth	
		Precipitation (1) Seasonal/Intermittent surfa	ce water (3)		Part of wetland/u		forest), complex (1) ridor (1)
		Perennial surface water (la 3c. Maximum water depth. Select or			Duration inundation/sate		
		>0.7 (27.6in) (3)		,,, , , , , , , , , , , , , , , , , ,	Regularly inundar	ted/saturate	
		0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	(2)		Seasonally inund X Seasonally satura		er 30cm (12in) (1)
		3e. Modifications to natural hydrolog			k and average.		—
		None or none apparent (12 X Recovered (7)	ditch	urbances observed	point source (non	stormwater)
		Recovering (3) 5 Recent or no recovery (1)	tile dike		filling/grading road bed/RR trac		
		Treecint of the recovery (1)	weir		dredging		A
		1	L	ater input	X other Historic	Wining	<u>Activity</u>
6.5	16.5	Metric 4. Habitat Al	teration a	and Develo	pment.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score or None or none apparent (4)	e or double chec	k and average.			
		Recovered (3)	2.5				
		Recovering (2) Recent or no recovery (1)	2.0				
		4b. Habitat development. Select onl Excellent (7)	y one and assigr	score.			
		Very good (6)					
		Good (5) Moderately good (4)					
		Fair (3) Poor to fair (2)					
		Poor (1)					
		4c. Habitat alteration. Score one or None or none apparent (9)		d average. urbances observed			\neg
		Recovered (6)	mowing		shrub/sapling ren		. 1
		Recovering (3) Recent or no recovery (1)	X grazing clearcut	ting	herbaceous/aqua sedimentation	itic bed rem	oval
	16.5]	selective		dredging farming		
	h		toxic po		nutrient enrichme	ent	
last revised	btotal this pa	~					

	1 la!a a		n Din alian	1			I = 7/22/2020
Site:	Harrisc	n Pow	er Pipeline	Rater(s):	Johr	ı Lewis	Date:7/23/2020
	16.5						
;	subtotal first pa	Ť					
0	16.5	Metr	ic 5. Special V	Vetlands	•		
max 10 pts.	subtotal	Check al	that apply and score as in	dicated.			
			Bog (10)				
			Fen (10)				
			Old growth forest (10)	(F)			
			Mature forested wetland	,	riotod bud	rology (10)	
			Lake Erie coastal/tributar		-	· ·	
			Lake Plain Sand Prairies			5gy (5)	
			Relict Wet Prairies (10)	(Oak Openings)	(10)		
			Known occurrence state/	ederal threatene	ed or enda	ngered species (10)	
			Significant migratory song			. ,	
			Category 1 Wetland. See				
		Motr	_			erspersion, microto	nography
2	18.5	IVICLI	ic o. I failt coi	iiiiiaiiiie	3, IIII	erspersion, inicroto	pograpity.
max 20 pts.	subtotal	Go Wet	and Varatation Communiti	Va	antotion (Sammunity Cayor Saala	
παλ 20 μιδ.	Subtotal		and Vegetation Communiti present using 0 to 3 scale.		0	Community Cover Scale Absent or comprises < 0.1ha (0.24)	171 acros) contiguous area
			Aquatic bed	·	1	Present and either comprises sm	
		1	Emergent			vegetation and is of moderate of	
		 6	Shrub			significant part but is of low qua	
		ŏ	Forest	_	2	Present and either comprises sign	
		Ŏ	Mudflats			vegetation and is of moderate of	
		0	Open water			part and is of high quality	
		Ŏ	Other	_	3	Present and comprises significan	t part, or more, of wetland's
		6b. horiz	zontal (plan view) Intersper	sion.		vegetation and is of high quality	1
		Select or					
			High (5)	Na	rrative De	scription of Vegetation Quality	
		-	Moderately high(4)		low	Low spp diversity and/or predomi	
			Moderate (3)	_		disturbance tolerant native spec	
			Moderately low (2)		mod	Native spp are dominant compon	
		∀	Low (1) None (0)			although nonnative and/or distu- can also be present, and specie	
		6c Cov	grage of invasive plants. R	ofor		moderately high, but generally	
		to Table	1 ORAM long form for list.	Add		threatened or endangered spp	
			t points for coverage	_	high	A predominance of native species	
			Extensive >75% cover (-5	5)	Ü	and/or disturbance tolerant nati	
			Moderate 25-75% cover (-3)		absent, and high spp diversity a	and often, but not always,
			Sparse 5-25% cover (-1)			the presence of rare, threatene	d, or endangered spp
			Nearly absent <5% cover				
			Absent (1)	Mu	udflat and	Open Water Class Quality	
			otopography.		0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale		1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0	Vegetated hummucks/tus		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		Ι <u>Ω</u>	Coarse woody debris >15		3	High 4ha (9.88 acres) or more	
		ΙŇ	Standing dead >25cm (10 Amphibian breeding pools	,	crotonoc	aphy Cover Scale	
		LU	Tamphinian preeding poor	<u> </u>	0	Absent	
					1	Present very small amounts or if	more common
					•	of marginal quality	
					2	Present in moderate amounts, but	t not of highest
						quality or in small amounts of h	_
					3	Present in moderate or greater a	
10 E	7					and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0
J. J	Metric 2. Buffers and surrounding land use		1
	Metric 3. Hydrology		9
	Metric 4. Habitat		6.5
	Metric 5. Special Wetland Communities		0
	Metric 6. Plant communities, interspersion, microtopography		2
	TOTAL SCORE 18.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: John Lewis

Date: 7/23/2020

Affiliation: Kleinfelder

Address: 51 Dutilh Road, Suite 240 Cranberry Township, PA 16066

Phone Number: 412-848-7376

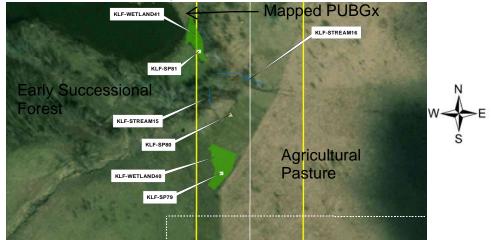
e-mail address: JALewis@kleinfelder.com

Name of Wetland: KLF-WETLAND41

Vegetation Communit(ies): Palustrine Emergent

HGM Class(es): DEPRESS

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

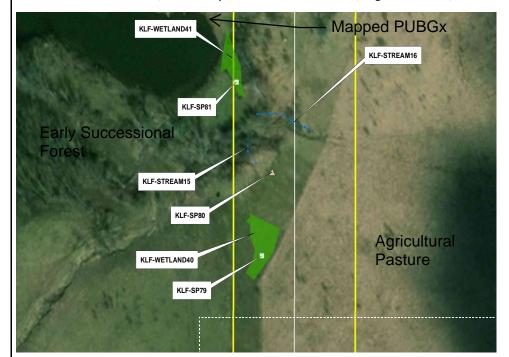


Lat/Long or UTM Coordinate 40.249637, -81.024347	
USGS Quad Name Flushing	
County Harrison	
Township Cadiz	
Section and Subsection Cadiz Township	
Hydrologic Unit Code HUC 050400011402	
Site Visit 07/23/2020	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map N/A	
Soil Survey MrF	
Delineation report/map Previously provided.	

Name of Wetland: KLF-WETLAND41

Wetland Size (acres, hectares): 0.014 acres

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.





KLF-WETLAND41 is a PEM wetland located in Cadiz Township, Harrison County, Ohio. The wetland is located to the west of Industrial Park Road. The wetland is located in a valley bottom and appears to be within a reclaimed strip-mine area and is associated with an NWI wetland. The surrounding area is used as pasture but it seems to have normalized to this new land use and does not exhibit signs of overgrazing; therefore normal circumstances are considered to be present.

Comments, Narrative Discussion, Justification of Category Changes:

The wetland is located in a valley bottom and appears to be within a reclaimed strip-mine area that is now used as a pasture field. This wetland abuts a mapped NWI wetland (PUBGx) outside of the AOI.

Final score: 22.5 Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	NO
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?	Wetland should be evaluated for possible	Go to Question 2
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO
		Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	<u>NO</u>
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or	Wetland is a Category 1 wetland	Go to Question 6
	no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	NO
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
	, , ,	Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland	Go to Question 8a
	invadive operate integral in rabie 1 in 20%.	Go to Question 8a	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

			_
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YFS	(NO)
Ju	an elevation less than 575 feet on the USGS map, adjacent to this	1 120	
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
O.D	prevent erosion and the loss of aquatic plants, i.e. the wetland is	123	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		, , , , , , , , , , , , , , , , , , , ,	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.	\/	(10)
9d	Does the wetland have a predominance of native species within its	YES	(NO)
	vegetation communities, although non-native or disturbance tolerant	Mattendia a Cataman	O- 4- O
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		3 Welland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		0 - 1 - 0 1 10	
-10	Lake Blein Cond Breinice (Och Openings) le the wetlend leasted in	Go to Question 10	410
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	(10)
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	Oo to Question in
	several inches of the surface, and often with a dominance of the	o wolland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies	l	
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Occupation Co. 111 11	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site:	Harri	son Power Pipeline	Rater(s):	John Lewis		Date:	7/23/2020
		1					
0	0	Metric 1. Wetland A	rea (size).			
max 6 pts.	subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts					
		25 to <50 acres (10.1 to <2					
		10 to <25 acres (4 to <10.7 3 to <10 acres (1.2 to <4ha					
		0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <					
		<0.1 acres (0.04ha) (0 pts)	, , , ,				
1	1	Metric 2. Upland bu	iffers and	l surroundi	ng land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width.					
		WIDE. Buffers average 50 MEDIUM. Buffers average					
		NARROW. Buffers average X VERY NARROW. Buffers					
		2b. Intensity of surrounding land use	. Select one or	double check and av	verage.		
		VERY LOW. 2nd growth of LOW. Old field (>10 years					
		MODERATELY HIGH. Re	sidential, fenced	pasture, park, conse	ervation tillage, new fallo	ow field. (3)	
	40	Metric 3. Hydrology		cropping, mining, co	onstruction. (1)		
12	13	inicule 3. Hydrology	/•				
max 30 pts.	subtotal	3a. Sources of Water. Score all that	apply.	3b.	Connectivity. Score all		
		High pH groundwater (5) Other groundwater (3)			X Between stream/		ner human use (1)
		X Precipitation (1) X Seasonal/Intermittent surfa	una watar (2)			pland (e.g. f	forest), complex (1)
		Perennial surface water (la		3d.	Duration inundation/sat		
		3c. Maximum water depth. Select o >0.7 (27.6in) (3)	nly one and assig	gn score.	Semi- to permane Regularly inunda	-	
		0.4 to 0.7m (15.7 to 27.6in	(2)		Seasonally inund	lated (2)	
		< < 0.4m (<15.7in) (1)3e. Modifications to natural hydrolog	ic <u>regime. Score</u>	e one or double chec	X Seasonally saturally sa	ated in uppe	r 30cm (12in) (1)
		None or none apparent (12	2) Check all dist	urbances observed			
		Recovered (7) Recovering (3)	ditch tile		point source (nor filling/grading	ıstormwater)
		Recent or no recovery (1)	dike		road bed/RR trac	:k	
			weir stormwa	ater input	dredging other Historic	Mining	Activity
7.5	00 =	Metric 4. Habitat Al	teration a	and Develo	pment.		 '
7.5	20.5	motific ii flabitat /ti	toration	ana 2010.0	pilloriti		
max 20 pts.	subtotal	4a. Substrate disturbance. Score or None or none apparent (4)		ck and average.			
		Recovered (3)	2.5				
		Recovering (2) Recent or no recovery (1)	2.0				
		4b. Habitat development. Select onl Excellent (7)	y one and assigr	n score.			
		Very good (6)					
		Good (5) Moderately good (4)					
		Fair (3)					
		Poor to fair (2)					
		4c. Habitat alteration. Score one or					
		None or none apparent (9) Recovered (6)	Check all dist	urbances observed	shrub/sapling ren	noval	
		X Recovering (3)	X grazing		herbaceous/aqua		oval
ı	20.5	Recent or no recovery (1)	clearcut selectiv	tting e cutting	sedimentation dredging		ı
	20.5			debris removal	farming nutrient enrichme	ant	
	btotal this pa	~	ιοχίο ρο	mutanto	nathent ennorme	71 TL	
last revised	1 Februa	ry 2001 jjm					

Site:	Harrisc	on Power Pipeline	Rater(s):	John	Lewis	Date:7/23/2020
		1				
	20.5					
	subtotal first pa	age				
0	20.5	Metric 5. Special V	Vetlands.			
max 10 pts	. subtotal	Check all that apply and score as in	dicated.			
		Bog (10) Fen (10)				
		Old growth forest (10)				
		Mature forested wetland (,		-1 (40)	
		Lake Erie coastal/tributary Lake Erie coastal/tributary		-	,	
		Lake Plain Sand Prairies			,g, (e)	
		Relict Wet Prairies (10)				
		Known occurrence state/f			• ,	
		Significant migratory song Category 1 Wetland. See				
		Metric 6. Plant cor				nogranhy
2	22.5	livietric o. i iarit cor	iiiiuiiiies	,	rispersion, inicroto	pograpity.
max 20 pts	. subtotal	J 6a. Wetland Vegetation Communiti	es. Veg e	etation C	Community Cover Scale	
		Score all present using 0 to 3 scale.		0	Absent or comprises <0.1ha (0.24	
		O Aquatic bed		1	Present and either comprises small	
		1 Emergent 0 Shrub			vegetation and is of moderate q significant part but is of low qua	
		0 Forest		2	Present and either comprises sign	
		0 Mudflats			vegetation and is of moderate of	
		Open water		0	part and is of high quality	
		6b. horizontal (plan view) Intersper	— sion	3	Present and comprises significan vegetation and is of high quality	
		Select only one.			regeration and to or riight quanty	
		High (5)	Narr	ative De	scription of Vegetation Quality	
		Moderately high(4) Moderate (3)		low	Low spp diversity and/or predomi disturbance tolerant native spec	
		Moderately low (2)		mod	Native spp are dominant component	
		Low (1)			although nonnative and/or distu	
		None (0)			can also be present, and specie	
		6c. Coverage of invasive plants. R to Table 1 ORAM long form for list.	eter Add		moderately high, but generally threatened or endangered spp	
		or deduct points for coverage		high	A predominance of native species	
		Extensive >75% cover (-5	,		and/or disturbance tolerant nati	''
		Moderate 25-75% cover (-3)		absent, and high spp diversity a	•
		Sparse 5-25% cover (-1) Nearly absent <5% cover	(0)		the presence of rare, threatened	a, or endangered spp
		X Absent (1)		flat and	Open Water Class Quality	
		6d. Microtopography.		0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale. O Vegetated hummucks/tus		2	Low 0.1 to <1ha (0.247 to 2.47 ac Moderate 1 to <4ha (2.47 to 9.88	
		O vegetated hummucks/tus O Coarse woody debris >15		3	High 4ha (9.88 acres) or more	acres)
		O Standing dead >25cm (10	in) dbh			
		Amphibian breeding pools	Micr		aphy Cover Scale	
				1	Absent Present very small amounts or if i	more common
				ı	of marginal quality	noro common
				2	Present in moderate amounts, bu	_
					quality or in small amounts of hi	
00.5	7			3	Present in moderate or greater ar and of highest quality	nounts
22.5					and or highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0
J	Metric 2. Buffers and surrounding land use		1
	Metric 3. Hydrology		12
	Metric 4. Habitat		7.5
	Metric 5. Special Wetland Communities		0
	Metric 6. Plant communities, interspersion, microtopography		2
	TOTAL SCORE 22.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	_	Evaluation of Categorization Result of ORAM		
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM		
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.		
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM		
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.		
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(20)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).		
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.		

Final Category					
Choose one	Category 1	Category 2	Category 3		

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: John Lewis

Date: 7/23/2020

Affiliation: Kleinfelder

Address: 51 Dutilh Road, Suite 240 Cranberry Township, PA 16066

Phone Number: 412-848-7376

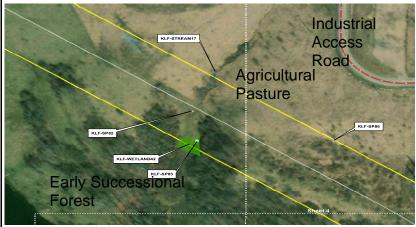
e-mail address: JALewis@kleinfelder.com

Name of Wetland: KLF-WETLAND42

Vegetation Communit(ies): Palustrine Emergent

HGM Class(es): DEPRESS

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



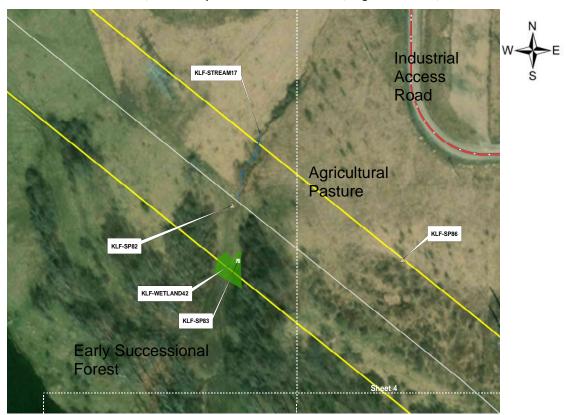


Lat/Long or UTM Coordinate 40.251161, -81.025790	
USGS Quad Name Flushing	
County Harrison	
Township Cadiz	
Section and Subsection Cadiz Township	
Hydrologic Unit Code HUC 050400011402	
Site Visit 07/23/2020	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map N/A	
Soil Survey MrF	
Delineation report/map Previously provided.	

Name of Wetland: KLF-WETLAND42

Wetland Size (acres, hectares): 0.023 acres

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



KLF-WETLAND42 is a PEM wetland located in Cadiz Township, Harrison County, Ohio. The wetland is located to the west of Industrial Park Road. The wetland is located in a valley bottom and appears to be within a reclaimed strip-mine area that is now used as a pasture field. The area seems to have normalized to this new land use and does not exhibit signs of overgrazing; therefore normal circumstances are considered to be present.

Comments, Narrative Discussion, Justification of Category Changes:

The wetland is located in a valley bottom and appears to be within a reclaimed strip-mine area that is now used as a pasture field.

Final score: 18.5 Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	NO
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?	Wetland should be evaluated for possible	Go to Question 2
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO
		Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	<u>NO</u>
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or	Wetland is a Category 1 wetland	Go to Question 6
	no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	NO
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
	, , ,	Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland	Go to Question 8a
	invadive operate into a in value via 20%.	Go to Question 8a	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

			_
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YFS	(NO)
Ju	an elevation less than 575 feet on the USGS map, adjacent to this	1 120	
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
O.D	prevent erosion and the loss of aquatic plants, i.e. the wetland is	123	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		, , , , , , , , , , , , , , , , , , , ,	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.	\/	(10)
9d	Does the wetland have a predominance of native species within its	YES	(NO)
	vegetation communities, although non-native or disturbance tolerant	Mattendia a Catamani	O- 4- O
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		3 Welland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		0 - 1 - 0 1 10	
-10	Lake Blein Cond Breinice (Och Openings) le the wetlend leasted in	Go to Question 10	410
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	(10)
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	Oo to Question in
	several inches of the surface, and often with a dominance of the	o wolland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies	l	
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	0	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site:	Harri	son Power Pipeline	Rater(s):	John Lewis		Date:	7/23/2020
		•					
0	0	Metric 1. Wetland A	rea (size).			
max 6 pts.	subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts					
		25 to <50 acres (10.1 to <2	0.2ha) (5 pts)				
		10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha					
		0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <	2ha) (2pts)				
		<0.1 acres (0.04ha) (0 pts)	, , , ,				
1	1	Metric 2. Upland bu	ffers and	l surroundi	ng land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width.					
		WIDE. Buffers average 50 MEDIUM. Buffers average	25m to <50m (8	2 to <164ft) around v	wetland perimeter (4)		
		NARROW. Buffers averag X VERY NARROW. Buffers					
		2b. Intensity of surrounding land use	. Select one or	double check and av	rerage.		
		VERY LOW. 2nd growth o LOW. Old field (>10 years	r older forest, pra), shrub land, yol	airie, savannan, wiidi ung second growth fo	ire area, etc. (7) orest. (5)		
		MODERATELY HIGH. Re X HIGH. Urban, industrial, o				w field. (3)	
	10	Metric 3. Hydrology	-	о. оррg,g, ос			
9	10						
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5)	apply.	3b.	Connectivity. Score all 100 year floodpla		
		Other groundwater (3)			X Between stream/	lake and oth	
		Precipitation (1) Seasonal/Intermittent surfa	ce water (3)		Part of wetland/u		forest), complex (1) ridor (1)
		Perennial surface water (la 3c. Maximum water depth. Select or			Duration inundation/sate		
		>0.7 (27.6in) (3)		,,, , , , , , , , , , , , , , , , , ,	Regularly inundar	ted/saturate	
		0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	(2)		Seasonally inund X Seasonally satura		er 30cm (12in) (1)
		3e. Modifications to natural hydrolog			k and average.		—
		None or none apparent (12 X Recovered (7)	ditch	urbances observed	point source (non	stormwater)
		Recovering (3) 5 Recent or no recovery (1)	tile dike		filling/grading road bed/RR trac		
		Treecint of the recovery (1)	weir		dredging		A
		1	L	ater input	X other Historic	Wining	<u>Activity</u>
6.5	16.5	Metric 4. Habitat Al	teration a	and Develo	pment.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score or None or none apparent (4)	e or double chec	k and average.			
		Recovered (3)	2.5				
		Recovering (2) Recent or no recovery (1)	2.0				
		4b. Habitat development. Select onl Excellent (7)	y one and assigr	score.			
		Very good (6)					
		Good (5) Moderately good (4)					
		Fair (3) Poor to fair (2)					
		Poor (1)					
		4c. Habitat alteration. Score one or None or none apparent (9)		d average. urbances observed			\neg
		Recovered (6)	mowing		shrub/sapling ren		. 1
		Recovering (3) Recent or no recovery (1)	X grazing clearcut	ting	herbaceous/aqua sedimentation	itic bed rem	oval
	16.5]	selective		dredging farming		
	h		toxic po		nutrient enrichme	ent	
last revised	btotal this pa	~					

	1 la!a a		n Din alian	1			I = 7/22/2020
Site:	Harrisc	n Pow	er Pipeline	Rater(s):	Johr	ı Lewis	Date:7/23/2020
	16.5						
;	subtotal first pa	Ť					
0	16.5	Metr	ic 5. Special V	Vetlands	•		
max 10 pts.	subtotal	Check al	that apply and score as in	dicated.			
			Bog (10)				
			Fen (10)				
			Old growth forest (10)	(F)			
			Mature forested wetland	,	riotod bud	rology (10)	
			Lake Erie coastal/tributar		-	· ·	
			Lake Plain Sand Prairies			5gy (5)	
			Relict Wet Prairies (10)	(Oak Openings)	(10)		
			Known occurrence state/	ederal threatene	ed or enda	ngered species (10)	
			Significant migratory song			. ,	
			Category 1 Wetland. See				
		Motr	_			erspersion, microto	nography
2	18.5	IVICLI	ic o. I failt coi	iiiiiaiiiie	3, IIII	erspersion, inicroto	pograpity.
max 20 pts.	subtotal	Go Wet	and Varatation Communiti	Va	antotion (Sammunity Cayor Saala	
παλ 20 μιδ.	Subtotal		and Vegetation Communiti present using 0 to 3 scale.		0	Community Cover Scale Absent or comprises < 0.1ha (0.24)	171 acros) contiguous area
			Aquatic bed	·	1	Present and either comprises sm	
		1	Emergent			vegetation and is of moderate of	
		 6	Shrub			significant part but is of low qua	
		ŏ	Forest	_	2	Present and either comprises sign	
		Ŏ	Mudflats			vegetation and is of moderate of	
		0	Open water			part and is of high quality	
		Ŏ	Other	_	3	Present and comprises significan	t part, or more, of wetland's
		6b. horiz	zontal (plan view) Intersper	sion.		vegetation and is of high quality	1
		Select or					
			High (5)	Na	rrative De	scription of Vegetation Quality	
		-	Moderately high(4)		low	Low spp diversity and/or predomi	
			Moderate (3)	_		disturbance tolerant native spec	
			Moderately low (2)		mod	Native spp are dominant compon	
		→	Low (1) None (0)			although nonnative and/or distu- can also be present, and specie	
		6c Cov	grage of invasive plants. R	ofor		moderately high, but generally	
		to Table	1 ORAM long form for list.	Add		threatened or endangered spp	
			t points for coverage	_	high	A predominance of native species	
			Extensive >75% cover (-5	5)	Ü	and/or disturbance tolerant nati	
			Moderate 25-75% cover (-3)		absent, and high spp diversity a	and often, but not always,
			Sparse 5-25% cover (-1)			the presence of rare, threatene	d, or endangered spp
			Nearly absent <5% cover				
			Absent (1)	Mu	udflat and	Open Water Class Quality	
			otopography.		0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale		1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0	Vegetated hummucks/tus		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		Ι <u>Ω</u>	Coarse woody debris >15		3	High 4ha (9.88 acres) or more	
		ΙŇ	Standing dead >25cm (10 Amphibian breeding pools	,	crotonoc	aphy Cover Scale	
		LU	Tamphinian preeding poor	<u> </u>	0	Absent	
					1	Present very small amounts or if	more common
					•	of marginal quality	
					2	Present in moderate amounts, but	t not of highest
						quality or in small amounts of h	_
					3	Present in moderate or greater a	
10 E	7					and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0
J. J	Metric 2. Buffers and surrounding land use		1
	Metric 3. Hydrology		9
	Metric 4. Habitat		6.5
	Metric 5. Special Wetland Communities		0
	Metric 6. Plant communities, interspersion, microtopography		2
	TOTAL SCORE 18.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	_	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(20)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

	Fin	al Category	
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: John Lewis

Date: 7/23/2020

Affiliation: Kleinfelder

Address: 51 Dutilh Road, Suite 240 Cranberry Township, PA 16066

Phone Number: 412-848-7376

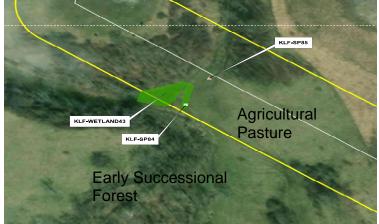
e-mail address: JALewis@kleinfelder.com

Name of Wetland: KLF-WETLAND43

Vegetation Communit(ies): Palustrine Emergent

HGM Class(es): DEPRESS

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



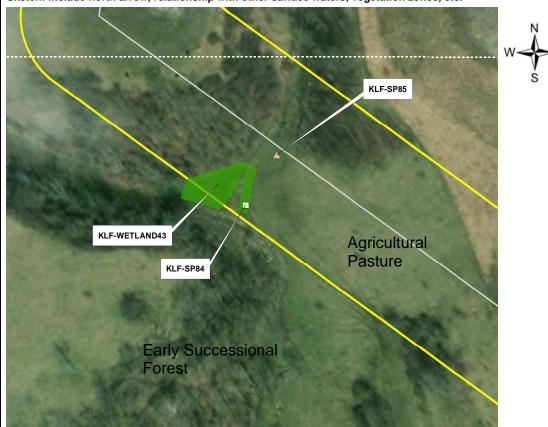


Lat/Long or UTM Coordinate 40.252205, -81.027668	
USGS Quad Name Flushing	
County Harrison	
Township Cadiz	
Section and Subsection Cadiz Township	
Hydrologic Unit Code HUC 050400011402	
Site Visit 07/23/2020	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map N/A	
Soil Survey MrF	
Delineation report/map Previously provided.	

Name of Wetland: KLF-WETLAND43

Wetland Size (acres, hectares): 0.063 acres

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



KLF-WETLAND43 is a PEM wetland located in Cadiz Township, Harrison County, Ohio. The wetland is located to the west of Industrial Park Road. The wetland is located in a valley bottom and appears to be within a reclaimed strip-mine area that is now used as a pasture field. The area seems to have normalized to this new land use and does not exhibit signs of overgrazing; therefore normal circumstances are considered to be present.

Comments, Narrative Discussion, Justification of Category Changes:

The wetland is located in a valley bottom and appears to be within a reclaimed strip-mine area that is now used as a pasture field.

Final score: 18.5 Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	NO
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?	Wetland should be evaluated for possible	Go to Question 2
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	NO
		Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	<u>NO</u>
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or	Wetland is a Category 1 wetland	Go to Question 6
	no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	NO
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
	, , ,	Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	NO
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland	Go to Question 8a
	invadive operate into a in value via 20%.	Go to Question 8a	
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

			_
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YFS	(NO)
Ju	an elevation less than 575 feet on the USGS map, adjacent to this	1 120	
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
O.D	prevent erosion and the loss of aquatic plants, i.e. the wetland is	123	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		, , , , , , , , , , , , , , , , , , , ,	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland		
	border alterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.	\/	(10)
9d	Does the wetland have a predominance of native species within its	YES	(NO)
	vegetation communities, although non-native or disturbance tolerant	Mattendia a Catamani	O- 4- O
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		3 Welland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?		
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		0 - 1 - 0 1 10	
-10	Lake Blein Cond Breisies (Och Openings) le the wetlend leasted in	Go to Question 10	410
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	(10)
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	Oo to Question in
	several inches of the surface, and often with a dominance of the	o wolland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies	l	
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	0	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site:	Harri	son Power Pipeline	Rater(s):	John Lewis		Date:	7/23/2020
		•					
0	0	Metric 1. Wetland A	rea (size).			
max 6 pts.	subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts					
		25 to <50 acres (10.1 to <2	0.2ha) (5 pts)				
		10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha					
		0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <	2ha) (2pts)				
		<0.1 acres (0.04ha) (0 pts)	, , , ,				
1	1	Metric 2. Upland bu	ffers and	l surroundi	ng land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width.					
		WIDE. Buffers average 50 MEDIUM. Buffers average	25m to <50m (8	2 to <164ft) around v	wetland perimeter (4)		
		NARROW. Buffers averag X VERY NARROW. Buffers					
		2b. Intensity of surrounding land use	. Select one or	double check and av	rerage.		
		VERY LOW. 2nd growth o LOW. Old field (>10 years	r older forest, pra), shrub land, yol	airie, savannan, wiidi ung second growth fo	ire area, etc. (7) orest. (5)		
		MODERATELY HIGH. Re X HIGH. Urban, industrial, o				w field. (3)	
	10	Metric 3. Hydrology	-	о. оррg,g, ос			
9	10						
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5)	apply.	3b.	Connectivity. Score all 100 year floodpla		
		Other groundwater (3)			X Between stream/	lake and oth	
		Precipitation (1) Seasonal/Intermittent surfa	ce water (3)		Part of wetland/u		forest), complex (1) ridor (1)
		Perennial surface water (la 3c. Maximum water depth. Select or			Duration inundation/sate		
		>0.7 (27.6in) (3)		,,, , , , , , , , , , , , , , , , , ,	Regularly inundar	ted/saturate	
		0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	(2)		Seasonally inund X Seasonally satura		er 30cm (12in) (1)
		3e. Modifications to natural hydrolog			k and average.		—
		None or none apparent (12 X Recovered (7)	ditch	urbances observed	point source (non	stormwater)
		Recovering (3) 5 Recent or no recovery (1)	tile dike		filling/grading road bed/RR trac		
		Treecint of the recovery (1)	weir		dredging		A
		1	L	ater input	X other Historic	Wining	<u>Activity</u>
6.5	16.5	Metric 4. Habitat Al	teration a	and Develo	pment.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score or None or none apparent (4)	e or double chec	k and average.			
		Recovered (3)	2.5				
		Recovering (2) Recent or no recovery (1)	2.0				
		4b. Habitat development. Select onl Excellent (7)	y one and assigr	score.			
		Very good (6)					
		Good (5) Moderately good (4)					
		Fair (3) Poor to fair (2)					
		Poor (1)					
		4c. Habitat alteration. Score one or None or none apparent (9)		d average. urbances observed			\neg
		Recovered (6)	mowing		shrub/sapling ren		. 1
		Recovering (3) Recent or no recovery (1)	X grazing clearcut	ting	herbaceous/aqua sedimentation	itic bed rem	oval
	16.5]	selective		dredging farming		
	h		toxic po		nutrient enrichme	ent	
last revised	btotal this pa	~					

	1 la!a a		n Din alian	1			I = 7/22/2020
Site:	Harrisc	n Pow	er Pipeline	Rater(s):	Johr	ı Lewis	Date:7/23/2020
	16.5						
;	subtotal first pa	Ť					
0	16.5	Metr	ic 5. Special V	Vetlands	•		
max 10 pts.	subtotal	Check al	that apply and score as in	dicated.			
			Bog (10)				
			Fen (10)				
			Old growth forest (10)	(F)			
			Mature forested wetland	,	riotod bud	rology (10)	
			Lake Erie coastal/tributar		-	· ·	
			Lake Plain Sand Prairies			5gy (5)	
			Relict Wet Prairies (10)	(Oak Openings)	(10)		
			Known occurrence state/	ederal threatene	ed or enda	ngered species (10)	
			Significant migratory song			. ,	
			Category 1 Wetland. See				
		Motr	_			erspersion, microto	nography
2	18.5	IVICLI	ic o. I failt coi	iiiiiaiiiie	3, IIII	erspersion, inicroto	pograpity.
max 20 pts.	subtotal	Go Wet	and Varatation Communiti	Va	antotion (Sammunity Cayor Saala	
παλ 20 μιδ.	Subtotal		and Vegetation Communiti present using 0 to 3 scale.		0	Community Cover Scale Absent or comprises < 0.1ha (0.24)	171 acros) contiguous area
			Aquatic bed	·	1	Present and either comprises sm	
		1	Emergent			vegetation and is of moderate of	
		 6	Shrub			significant part but is of low qua	
		ŏ	Forest	_	2	Present and either comprises sign	
		Ŏ	Mudflats			vegetation and is of moderate of	
		0	Open water			part and is of high quality	
		Ŏ	Other	_	3	Present and comprises significan	t part, or more, of wetland's
		6b. horiz	zontal (plan view) Intersper	sion.		vegetation and is of high quality	1
		Select or					
			High (5)	Na	rrative De	scription of Vegetation Quality	
		-	Moderately high(4)		low	Low spp diversity and/or predomi	
			Moderate (3)	_		disturbance tolerant native spec	
			Moderately low (2)		mod	Native spp are dominant compon	
		∀	Low (1) None (0)			although nonnative and/or distu- can also be present, and specie	
		6c Cov	grage of invasive plants. R	ofor		moderately high, but generally	
		to Table	1 ORAM long form for list.	Add		threatened or endangered spp	
			t points for coverage	_	high	A predominance of native species	
			Extensive >75% cover (-5	5)	Ü	and/or disturbance tolerant nati	
			Moderate 25-75% cover (-3)		absent, and high spp diversity a	and often, but not always,
			Sparse 5-25% cover (-1)			the presence of rare, threatene	d, or endangered spp
			Nearly absent <5% cover				
			Absent (1)	Mu	udflat and	Open Water Class Quality	
			otopography.		0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale		1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0	Vegetated hummucks/tus		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		Ι <u>δ</u>	Coarse woody debris >15		3	High 4ha (9.88 acres) or more	
		ΙŇ	Standing dead >25cm (10 Amphibian breeding pools	,	crotonoc	aphy Cover Scale	
		LU	Tamphinian preeding poor	<u> </u>	0	Absent	
					1	Present very small amounts or if	more common
					•	of marginal quality	
					2	Present in moderate amounts, but	t not of highest
						quality or in small amounts of h	_
					3	Present in moderate or greater a	
10 E	7					and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0
J. J	Metric 2. Buffers and surrounding land use		1
	Metric 3. Hydrology		9
	Metric 4. Habitat		6.5
	Metric 5. Special Wetland Communities		0
	Metric 6. Plant communities, interspersion, microtopography		2
	TOTAL SCORE 18.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	_	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(20)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category			
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

ATTACHMENT C

Headwater Habitat Evaluation Index (HHEI) Forms

Primary Headwater Habitat Evaluation Form

29



HHEI Score (sum of metrics 1, 2, 3):

BIDR SLABS [16 pts]	
Total of Percentages of Bidr State, Boolier, Cobbie, Before State, Soutier, Cobbie, Before State, State, Soutier, Cobbie, Before State,	EA (mi²) <u>0.11</u>
NOTE: Complete All Items On This Form - Refor to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions FREAM CHANNEL	MILE
SUBSTRATE (Estimate percent of every type of substrate present. Check two predominant substrate boxes (Max of S2), Add total number of significant substrate bytes found (Asx of 6), Final metric store is sum of boxes A & B. (Max of S2), Add total number of significant substrate bytes found (Asx of 6), Final metric store is sum of boxes A & B. (Max of S2), Add total number of significant substrate bytes found (Asx of 6), Final metric store is sum of boxes A & B. (Max of S2), Add total number of significant substrate bytes found (Asx of 6), Final metric store is sum of boxes A & B. (Max of S2), Add total number of significant substrate bytes found (Asx of 6), Final metric store is sum of boxes A & B. (Max of S2), Add total number of significant substrate bytes (Asx of ABD ASX of S2) (Asx of ABD ASX of S2) (Asx of ABD ASX of S2) (Asx of ABD ASX of S2) (Asx of ABD ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of ABDA ASX of S2) (Asx of S	d banks.
Comments Comments	
SUBSTRATE (Estimate parcent of every type of substrate present. Check two preton insert substrate boxes (Nax of 32), Add total number of significant substrate types found (Nox of 8). Final metric score is sun of boxes A & B.	
Max of 32, Add total number of significant substrate types found (Max of 8), Final metric score is sum of boxes A & 8. PERCENT	
BLDR SLABS [16 pts]	HHEI
BOULDE PLASE 10 16 15 15 15 15 15 15 15	Metric
SEDROCK [16 pis]	Points
Cobbit (95-256 mm) (12 pts) 65% 0 CLAY of HARDPAN (3 pts)	
GRAVEL (2-64 mm) [9 pts]	Substrate
SAND (2 mm) [6 pts] 10% 0.65 10% 0.85 0.85 10% 0.85	Max = 40
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock Percentage Check 1 Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock Percentage Check 1 Total NUMBER OF SUBSTRATE TYPES 21 TOTAL NUMBER OF SUBSTRATE TYPES 3 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 230 centimeters [20 pts]	
Total of Percentages of Bild* 0.65 Slabs, Boulder, Cobble, Bedrock PRE OF TWO MOST PREDOMINANT SUBSTRATE TYPES 21 TOTAL NUMBER OF SUBSTRATE TYPES 3 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): >30 centimeters [20 pts] >22.5 - 30 cm [30 pts] >10 - 2.5 cm [25 pts] 0 < 5 cm [5 pts] 10 - 2.5 cm [25 pts] 0 NO WATER OR MOIST CHANNEL [0 pts] PAXIMUM POOL DEPTH (centimeters) O BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): >4.0 meters >> 13) [30 pts] >3.0 m -4.0 m (>9° 7° -13') [25 pts] >3.0 m -4.0 m (>9° 7° -4'8') [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (meters) This information must also be completed RIPARIAN WIDTH R (Per Bank) Wide>10m RIPARIAN WIDTH R (Per Bank) Wide>10m Advice>10m Average BankFull WIDTH (meters) 1.2 This information must also be completed RIPARIAN WIDTH R (Per Bank) Wide>10m Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) 1.2 This information must also be completed RIPARIAN WIDTH R (Per Bank) Wide>10m Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) 1.2 This information must also be completed Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) 1.2 This information must also be completed Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) 1.2 This information must also be completed RIPARIAN WIDTH R (Per Bank) Undoen of Must also be completed Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull WiDTH (meters) Average BankFull W	
Slabs, Boulder, Cobble, Bedrock DRE OF TWO MOST PREDOMINANT SUBSTRATE TYPES 21 TOTAL NUMBER OF SUBSTRATE TYPES 3 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): >30 centimeters [20 pts]	24
Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ff) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 330 centimeters [20 pts]	A + B
Maximum Pool Depth (Measure the maximum pool depth within the 51 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): >30 centimeters [20 pts]	7.0
plunge pools from road culverts or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts]	
plunge pools from road culverts or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts]	Pool Depth
>22.5 - 30 cm [30 pts]	Max = 30
>22.5 - 30 cm [30 pts]	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY R (Per Bank) Wide >10m Wide >	
COMMENTS MAXIMUM POOL DEPTH (centimeters) D BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters)> 13) [30 pts] > 3.0 m - 4.0 m (>9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (>9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (>9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (meters) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH RIPARI	_
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters > 13') [30 pts]	0
AVERAGE BANKFULL WIDTH (meters) This information must also be sometimes. RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH	Bankfull Widtl Max = 30
AVERAGE BANKFULL WIDTH (meters) This information must also be completed by the series of the series	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH RIP	
RIPARIAN ZONE AND FLOODPLAIN QUALITY R RIPARIAN WIDTH R Wide >10m Moderate 5-10m None None COMMENTS FLOODPLAIN QUALITY Residential, Park, New Field Moist Channel, isolated pools, no flow (Intermitent) SINUOSITY (Number of bends per 61 m (200 ft) of channel) **NOTE: River Left (L) and Right ® as looking downstream **NOTE: River Left (L) and Right ® as looking downstream **NOTE: River Left (L) and River Lef	5
RIPARIAN WIDTH RIPARI	
R (Per Bank) Uide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Narrow <5m None Residential, Park, New Field Open Pasture, Row Crop Fenced Pasture Mining or Construction COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): Rewide yet and the forest, Wetland Mature Forest, Wetland Mature Forest, Wetland Mature Forest, Wetland Mature Forest, Wetland Moderate 5-10m Mining or Construction Copen Pasture, Row Crop Mining or Construction Moist Channel, isolated pools, no flow (Intermitent) Dry channel, no water (Ephemeral) Check ONLY one box):	
R (Per Bank) L R (Most predominant per Bank) L R Wide >10m	
Moderate 5-10m	
Narrow <5m	
None Fenced Pasture Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermitent) Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral) SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):)
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitent) Dry channel, no water (Ephemeral)	
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitent) Dry channel, no water (Ephemeral)	
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 1.0 2.0 3.0	
[□] 0.5	
EAM GRADIENT ESTIMATE	

October 24, 2002 Revision PHWH Form Page - 1

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







HHEI Score (sum of metrics 1, 2, 3):

SITE	NAME/LOCATION	KLF-STREAM16									
		SITE NUMBER	₹		RIVE	R BASIN HUC 12:	050400011402			DRAINAGE	AREA (mi²) <u>0.11</u>
LENG	TH OF STREAM R	EACH (ft.)	< 100 L	_AT. <u>40.2</u>	249496	LONG <u>-8</u>	1.024062	RI	VER CODE	RI	VER MILE
DATE	7/23/2020	_SCORER	K. Kiehart		CON	MENTS Construc	ted post-mining chan	nel consist	ing of rip rap	stone and er	oded banks.
	NOT	E: Complete All Item	s On This Form	ı - Refer	to "Field	d Evaluation Manu	ıal for Ohio's PHWH	l Streams'	' for Instruc	tions	
	REAM CHANNEL DDIFICATIONS:	□ NONE /NATURAL	L CHANNEL	□ RE	ECOVEREI	D = RECOVERING	G RECENT OF	r no recov	/ERY		
		timate percent of event of event of signification						& B			HHEI
TY		otal fluffiber of significa	PERCENT		TYPE	o). I mai memo sco	ile is suill of boxes A		PERCENT		Metric
	BLDR SLAE	3S [16 pts]				SILT [3 pts]					Points
	BOULDER	(>256 mm) [16 pts]				LEAF PACK/WO	ODY DEBRIS [3 pts]	_			
	BEDROCK	[16 pts]				FINE DETRITUS	[3 pts]				Substrate
	COBBLE (6	5-256 mm) [12 pts]	75%			CLAY or HARDP.	AN [3 pts]	_		. l <u> </u>	Max = 40
	☐ GRAVEL (2	:-64 mm) [9 pts]	15%			MUCK [0 pts]		_		. 1	
	SAND (<2 r	nm) [6 pts]	10%			ARTIFICIAL [3 pt	s]	_		. 11	
			()	4)		Substrate					24
		Percentages of Bldr ılder, Cobble, Bedrock	0.75			Percentage Chec	k 1			-	A+D
800P		PREDOMINANT SUE		e —		TOTAL NUMBER	OF SUBSTRATE T	VDES			A + B
JOUR	- OI 1440 MI021	I VEDOMINAMI 20E	OINAIE ITPE	.5	21	TOTAL NUMBER	OI SUBSTRATE I	IFES		3	
2.	Maximum Pool D	epth (<i>Measure the m</i>	aximum pool d	epth with	hin the 6	– 61 <i>meter (200 ft</i>) e	valuation reach at the	e time of ev	 valuation. Av	void —	Pool Depth
		road culverts or storm		(Check C		• • •					Max = 30
	>30 centimeters [2	0 pts]			> 5 ci	m - 10 cm [15 pts]					
	>22.5 - 30 cm [30	•				m [5 pts]					
	>10 - 22.5 cm [25			a		VATER OR MOIST	CHANNEL [0 pts]				0
										<u> </u>	
(COMMENTS					MAXIMU 	M POOL DEPTH (ce	entimeters)	0	
3.	BANK FULL WID	TH (Measured as the	average of 3-4	measure	ements)	(Check	ONLY one box):			-	Bankfull Width
	> 4.0 meters)> 13	· - · -				m - 1.5 m (>3' 3" -	4' 8") [15 pts]				Max = 30
_	> 3.0 m - 4.0 m (>9	9' 7" - 13') [25 pts]		•	<u>≤</u> 1.0	m (<=3' 3") [5 pts]				I_	
_	> 1.5 m - 3.0 m (>9	9' 7" - 4' 8") [20 pts]								- 11	
	00141451170					AVERAG	E BANKFULL WIDT	ΓH (meters	s)		5
•	COMMENTS							·	1	.5	
		This information w	t aloo bo oor								
	DID A DIANI ZONE	This information m		_	TE D:				*		
		AND FLOODPLAIN C				. ,	® as looking downst	ııeam	*		
ı	RIP R (Per Bank)	ARIAN WIDTH	_ <u>F</u>	LOODPL L R		<u>ALITY</u> : predominant per E	Bank)	ı	R		
_	Wide >10m					re Forest, Wetland	will,			rvation Tillage	j
2	Moderate 5-					ture Forest, Shrub	or Old Field			or Industrial	-
	Narrow <5n					lential, Park, New I		© 6	_	Pasture, Row	Crop
0	None None					ed Pasture	.5.0		_	or Constructi	•
(COMMENTS				. 3				19		
	•	At Time of Evaluation)	(Check ONL)	one box	<):	5			_		
Stream Flowing Moist Channel, isolated pools, no flow (Intermited							itent)				
		ith isolated pools (Inte	rstitial)			≖ Dr	y channel, no water ((Ephemera	1)		
	COMMENTS										
	SINUOSITY (Num	ber of bends per 61 m	(200 ft) of chan	nel) (Cl	heck ON	LY one box):					
	None		- 1	.0			2.0			3.0	
	0.5		- 1	.5		-	2.5			>3	
STRF	AM GRADIENT ES	STIMATE									
	Flat (0.5 ft/100 ft)		Flat to Modera	ate	2	Moderate (2 ft/10	Oft)	Moderat	e to Severe	□ Se	evere (10 ft/100 ft)
							/			50	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED ¹ DOWNSTREAM DE	? - Yes Mo	QHEI Score(If	yes, Attach Completed QHEI Fo	orm)
■ WWH Name: Brushy Fork		Dis	stance from Evaluated Stream	0.2 mi
CWH Name:		Dis	stance from Evaluated Stream	
			stance from Evaluated Stream	
MAPPING: ATTAC	H COPIES OF MAPS, INCLUDING THE E	ENTIRE WATERSHED AREA. CLEA	ARLY MARK THE SITE LOCA	TION
USGS Quadrangle Name	e: Flushing and Jewett	NRCS Soil Map Page:	NRCS Soil Map S	tream Order
County Harrison		Township / City: <u>Ca</u>	adiz	
MISCELLANEOUS				
Base Flow Conditions? (Y/N):	Y Date of last precipitation	7/22/2020	Quantity 0.36 inches	
Photograph Information	Provided in wetland and stream delineat	tion report.		
Elevated Turbidity? (Y/N):	N Canopy (%	open): <u>80% open</u>		
Were samples collected for water chemi	stry? (Y/N): N (Note la	ab sample no. or id. And attach resul	lts) Lab Number:	
Field Measures: Temp (°C	Dissolved Oxygen (mg/l))pH (S.U.)	Conductivity (μmhos	s/com)
Is the sampling reach representative of t	he stream (Y/N) Y	If not, please explain:		
Additional comments/description of pollu	ition impacts:			
BIOTIC EVALUATI	<u>ON</u>			
Performed? (Y/N): Y	(If yes, Record all observations. Voucher colle ID number. Include appropriate field data sheet			
Fish Observed? (Y/N)	N Voucher? (Y/N) N	Salamanders Observed? (Y/	/N) <u>N</u> Voi	ucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N)	N Voucher? (Y/N) N	Aquatic Macroinvertebrates	Observed? (Y/N) N Voi	ucher? (Y/N) N
Comments Regarding Biology:	No macroinvertebrates were observed.			

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







HHEI Score (sum of metrics 1, 2, 3):

(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE BLDR SLABS [16 pts] BBLDR LABS [16 pts] Substrate [Max = 40] Substrate [Max = 40] Substrate [Max = 40] Substrate [Max = 40] ARTIFICIAL [3 pts] SUBSTRATE TYPES ARTIFICIAL [3 pts] SUBSTRATE TYPES 3 TOTAL NUMBER OF SUBSTRATE TYPES 3 AA + B SCORE OF TWO MOST PREDOMINANT SUBSTRATE TYPES 21 TOTAL NUMBER OF SUBSTRATE TYPES 3 Pool Depth [Max = 30] Pool Depth [Max = 30] Pool Depth [Max = 30] Pool Depth [Max = 30] COMMENTS MAXIMUM POOL DEPTH (centimeters) 0	SIT	E NAME/LOCATION	KLF-STREAM17								
DATE			SITE NUMBER	R	_ RI	VER BASIN HUC	12: 0504000	11402		DRAI	NAGE AREA (mi²) <u>0.0007</u>
NOTE: Complete All Hems On This Form - Refer to "Field Evaluation Manual for Ohlo's PHWH Streams" for Instructions STEEM MANNEL NOTE AND FAMEL CHANNEL SECONDERD SECONDERD SECONDERD	LEN	GTH OF STREAM R	EACH (ft.)	< 100 LAT	. 40.25158	B6LONG	-81.025727		RIVER	CODE	RIVER MILE
STREAM CHANNEL	DAT	E 7/23/2020	_SCORER	K. Kiehart	_	COMMENTS Const	ructed post-r	mining channel co	onsisting o	f rip rap stone	and eroded banks.
MODIFICATIONS: NONE MAIRSAL CAWNEL		NOT	E: Complete All Items	s On This Form - F	Refer to "F	ield Evaluation Ma	anual for Ol	nio's PHWH Stre	ams" for I	nstructions	
Maker of 32). Add total number of significant substates types Found rights of 8). Final maries acces is sum of house A & 8. PERCENT			□ NONE /NATURAL	CHANNEL	□ RECOVE	ERED - RECOVER	RING	RECENT OR NO F	RECOVERY		
TYPE	1.										HHEI
BOULDER (Т	•	ital fluffibel of Significa		•		Score is suit	I OI DOXES A & D.	PER	CENT	Metric
Substitute Sub		BLDR SLAE	S [16 pts]		0 0	SILT [3 pts]					Points
Score of two Most read outvoirs or storm water pipes 21			· · · · · · · · · · · · · · · · · · ·			LLAI FACIVI		BRIS [3 pts]			
SCORD SAND C2 mm 16 bits 30% 2		BLDROCK	- · · ·			I INC DETRIT		_			
Scand Camp B pis 10% 24						CLAT OF HAIN	DPAN [3 pts]			Max = 40
Solid Color Color		GRAVEL (2				MUCK [U pts])t.a.]				
Total of Percentages of Bidr 0.6 Percentage Check 1	_	5AND (<2 h	im) [6 pts]			ARTIFICIAL [3	s ptsj				
A comments Comment				0.6			heck	1			
Pulpage pools from road culverts or storm water pipes (Check ONLY one box):	sco				21	TOTAL NUMB	BER OF SUB	STRATE TYPES	8	3	5
30 centimeters [20 pts]	2.) evaluation	reach at the time	of evaluat	tion. Avoid	Pool Depth
Section Sect				water pipes) (Ch		,					Max = 30
Solution Solution		_	-				ts]				
COMMENTS MAXIMUM POOL DEPTH (centimeters) 0 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): □ > 4.0 meters > 13) [30 pts] □ > 3.0 m - 4.0 m (>9) 7" - 4" 8") [20 pts] □ > 1.5 m - 3.0 m (>9) 7" - 4" 8") [20 pts] □ > 1.5 m - 3.0 m (>9) 7" - 4" 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (meters) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) L R (-				ICT CLIANINI	T1 [0 mta]			
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): 3.	_	>10 - 22.5 cm [25]	DISJ		2 N	U WATER OR MOI	IST CHANNE	el (u pts)			0
2		COMMENTS				MAXII	MUM POOL	DEPTH (centime	eters)	0	
Note Note	3.	BANK FULL WIDT	H (Measured as the	average of 3-4 me	asuremen	ts) (Che	eck <i>ONLY</i> o	ne box):			Bankfull Width
AVERAGE BANKFULL WIDTH (meters) 1.5 5		,				•	, -	pts]			Max = 30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY		> 1.5 m - 3.0 m (>9	o' 7" - 4' 8") [20 pts]								
RIPARIAN ZONE AND FLOODPLAIN QUALITY TRIPARIAN WIDTH TRIPARI		COMMENTS				AVER	AGE BANK	FULL WIDTH (m	eters)	1.5	5
RIPARIAN ZONE AND FLOODPLAIN QUALITY TRIPARIAN WIDTH TRIPARI											
RIPARIAN WIDTH FLOODFLAIT QUALITY Ref Bank) L R Ref Bank) L R Ref Bank) L R Ref Bank) L R Ref Bank) Residential, Park, New Field						·				AL.	
L R (Per Bank)						• •	gnt ® as looi	king downstream		^	
	L		ARIAN WIDTH				er Bank)	İ	L R		
Moderate 5-10ff Immature Forest, Strub or Old Field Open Pasture, Row Crop None Fenced Pasture Mining or Construction		_ ` `			•		•			Conservation	Tillage
Narrow Sm Residential, Park, New Field Open Pasture, Row Crop None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	Ø	Moderate 5- ■ Moderate	10m		□ Im	ımature Forest, Shı	rub or Old Fi	eld		Urban or Indu	strial
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing		□ Narrow <5m	ı		- R	esidential, Park, Ne	w Field	2	Ø	Open Pasture	, Row Crop
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing		None			□ Fe	enced Pasture				Mining or Con	struction
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3		COMMENTS									
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 STREAM GRADIENT ESTIMATE		FLOW REGIME (A	t Time of Evaluation)	(Check ONLY or	e box):						
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 2.5 >3 STREAM GRADIENT ESTIMATE		Stream Flowing					Moist Chan	nel, isolated pool	s, no flow (Intermitent)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None			th isolated pools (Inter	stitial)			Dry channe	l, no water (Ephe	meral)		
None 1.0 2.0 3.0 0.5 1.5 2.5 >3 STREAM GRADIENT ESTIMATE			per of bonds par 61 m	(200 ft) of channel	(Chool:	ONI V and have					
0.5		_ `	per or perius per o i M	,	CHECK	ONL FOILE DOX).	- 20			п 3 0	
STREAM GRADIENT ESTIMATE		None					2.0				
				1.0			2.0				
				Flat to Moderate		Moderate (2 ft	/100 ft)	- Мо	oderate to 9	Severe 📮	Severe (10 ft/100 ft)

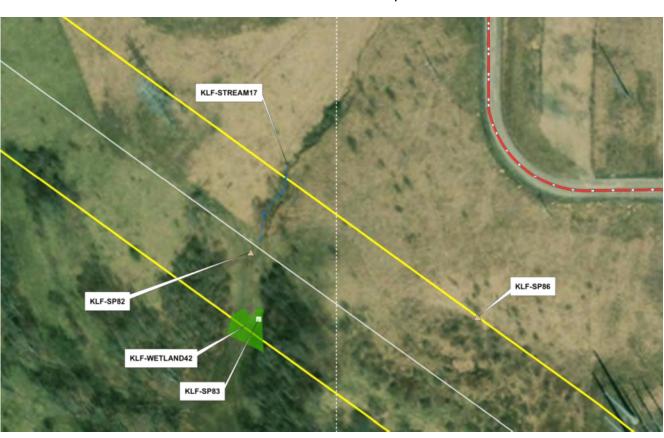
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED	?? - □ Yes □ No ESIGNATED USE(S)	O QHEI Score(If yes, Attach Completed QHEI I	Form)			
■ WWH Name: Brushy Fork	LSIGNATED USE(S)		Distance from Evaluated Stream	<u>0.1 mi</u>			
CWH Name:			Distance from Evaluated Stream				
MAPPING: ATTAC	CH COPIES OF MAPS, INCLUDING T	THE <u>ENTIRE</u> WATERSHED AREA. CLI	EARLY MARK THE SITE LOCA	ATION			
USGS Quadrangle Nam	e: Flushing and Jewett	NRCS Soil Map Page:	NRCS Soil Map	Stream Order			
County <u>Harrison</u>		Township / City: <u>C</u>	Cadiz				
MISCELLANEOUS	;						
Base Flow Conditions? (Y/N):	Y Date of last precipit	tation 7/22/2020	Quantity 0.36 inches				
Photograph Information	Provided in wetland and stream del	lineation report.					
Elevated Turbidity? (Y/N):	N Canop	oy (% open): <u>90% open</u>					
Were samples collected for water chem	nistry? (Y/N): N (N	ote lab sample no. or id. And attach res	sults) Lab Number:				
Field Measures: Temp (°C	C) Dissolved Oxygen ((mg/l) pH (S.U.)_	Conductivity (μmhc	os/com)			
Is the sampling reach representative of	the stream (Y/N)	If not, please explain: _					
Additional comments/description of poll	ution impacts:						
BIOTIC EVALUAT	<u>ION</u>						
Performed? (Y/N): Y		r collections optional. NOTE: all voucher sam a sheets from the Primary Headwater Habitat	•				
Fish Observed? (Y/N)	N Voucher? (Y/N) N	Salamanders Observed? (Y/N) <u>N</u> Vo	oucher? (Y/N) N			
Frogs or Tadpoles Observed? (Y/N)	N Voucher? (Y/N) N	Aquatic Macroinvertebrate	es Observed? (Y/N) N Vo	oucher? (Y/N) N			
Comments Regarding Biology:	No macroinvertebrates were observ	ved.					

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





ATTACHMENT D

Photo Log



Photograph 1: View Upstream of KLF-STREAM15



Photograph 2: View Downstream of KLF-STREAM15



Photograph 3: View Across of KLF-STREAM15



Photograph 4: View Upstream of KLF-STREAM16



Photograph 5: View Downstream of KLF-STREAM16



Photograph 6: View Across of KLF-STREAM16



Photograph 7: View Upstream of KLF-STREAM17



Photograph 8: View Downstream of KLF-STREAM17



Photograph 9: View Across of KLF-STREAM17



Photograph 10: View North of KLF-WETLAND39



Photograph 11: View South of KLF-WETLAND39



Photograph 12: View East of KLF-WETLAND39



Photograph 13: View West of KLF-WETLAND39



Photograph 14: View North of KLF-WETLAND40



Photograph 15: View South of KLF-WETLAND40



Photograph 16: View East of KLF-WETLAND40



Photograph 17: View West of KLF-WETLAND40



Photograph 18: View North of KLF-WETLAND41



Photograph 19: View South of KLF-WETLAND41



Photograph 20: View East of KLF-WETLAND41



Photograph 21: View West of KLF-WETLAND41



Photograph 22: View North of KLF-WETLAND42



Photograph 23: View South of KLF-WETLAND42



Photograph 24: View East of KLF-WETLAND42



Photograph 25: View West of KLF-WETLAND42



Photograph 26: View North of KLF-WETLAND43



Photograph 27: View South of KLF-WETLAND43



Photograph 28: View East of KLF-WETLAND43



Photograph 29: View West of KLF-WETLAND43



Photograph 30: View North of KLF-SP78



Photograph 31: View South of KLF-SP78



Photograph 32: View East of KLF-SP78



Photograph 33: View West of KLF-SP78



Photograph 34: View North of KLF-SP80



Photograph 35: View South of KLF-SP80



Photograph 36: View East of KLF-SP80



Photograph 37: View West of KLF-SP80



Photograph 38: View North of KLF-SP82



Photograph 39: View South of KLF-SP82



Photograph 40: View East of KLF-SP82



Photograph 41: View West of KLF-SP82



Photograph 42: View North of KLF-SP85



Photograph 43: View South of KLF-SP85



Photograph 44: View East of KLF-SP85



Photograph 45: View West of KLF-SP85



Photograph 46: View North of KLF-SP86



Photograph 47: View South of KLF-SP86



Photograph 48: View East of KLF-SP86



Photograph 49: View West of KLF-SP86

ATTACHMENT E

Approved Jurisdictional Determination (AJD)



DEPARTMENT OF THE ARMY

HUNTINGTON DISTRICT, CORPS OF ENGINEERS 502 EIGHTH STREET HUNTINGTON, WEST VIRGINIA 25701-2070

June 11, 2021

Regulatory Division Energy Resource Branch LRH-2020-686-TUS-UNT Brushy Fork

APPROVED JURISDICTIONAL DETERMINATION

Nicole Makela Advanced Power Services (NA) Inc. 155 Federal St., 17th Floor Boston, Massachussets 02110

Dear Ms. Makela:

I refer to the *Request for Approved Jurisdictional Determination Harrison Power Pipeline Harrison County, Ohio* submitted on your behalf by Kleinfelder, Inc. You have requested an approved jurisdictional determination (JD) for the potentially jurisdictional and non-jurisdictional features located within the 23.4-acre property. The subject property is located in Cadiz, Harrison County, Ohio (latitude 40.250419°N, longitude 81.024028°W). Your JD request has been assigned the following file number: LRH-2020-686-TUS-UNT Brushy Fork. Please reference this number on all future correspondence related to this JD request.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328, including the amendments to 33 FFR 328.3 (85 Federal Register 22250), and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a Department of the Army (DA) permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The Navigable Waters Protection Rule, which became effective on June 22, 2020, was followed in this verification of Section 404 jurisdiction for the features located within the AJD boundary. Based upon a review of the submitted report and additional information available to us, this office has determined the following:

• WetlandKLF-41 (0.014 acre) directly abuts an (a)(3) water identified in 33 CFR 328.3, and is a water of the United States per 33 CFR 328.3(a)(4).

These aforementioned aquatic features are subject to regulation under Section 404 and are depicted on the enclosed map titled "Figure 2. Aerial Imagery Map Harrison Power Pipeline" and listed in the enclosed AJD Table. If your proposed project is unable to avoid the discharge of dredged and/or fill material into waters of the United States, you must obtain an authorization from this office.

Additionally, this office has determined the following:

- KLF-Stream15, KLF-Stream16 and KLF-Stream17 (242 linear feet within area of interest) exhibit ephemeral flow and are not waters of the United States per 33 CFR 328.3(b)(3).
- Wetlands KLF-Wetland39, KLF-Wetland40, KLF-Wetland42, and KLF-Wetland43 (0.165 acre) do not meet the definition of an adjacent wetland and are not considered waters of the United States per 33 CFR 328.3(b)(1).

The above listed features are not considered jurisdictional waters of the United States and are not subject to regulation under Section 404. These non-jurisdictional features are depicted on the enclosed map titled "Figure 2. Aerial Imagery Map Harrison Power Pipeline" and are also listed in the enclosed AJD Table. However, you should contact the Ohio Environmental Protection Agency, Division of Surface Water, at (614) 664-2001 to determine state permit requirements.

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an approved JD for the subject site within the approved JD boundary. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeal Review Officer
United States Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699

Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an

RFA form, it must be received at the above address by August 10, 2021. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This determination has been conducted to identify the limits of the Corps' Section 404 jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any questions concerning the above, please contact Ms. Rachel Klug of the Energy Resource Branch at 304-399-5858, by mail at the above address, or by email at: rachel.a.klug@usace.army.mil.

Sincerely,

Adam Fannin Regulatory Project Manager Energy Resource Branch

Enclosures

cc (via email):

Mr. John Lewis (Kleinfelder, Inc.)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Nicole Makela	File Number: LRH-2020-686-TUS	Date: 6/11/2021
Attached is:		See Section below
INITIAL PROFFERED PERMIT (Standar	d Permit or Letter of permission)	A
PROFFERED PERMIT (Standard Permit of	or Letter of permission)	В
PERMIT DENIAL		С
X APPROVED JURISDICTIONAL DETER	MINATION	D
PRELIMINARY JURISDICTIONAL DET	ΓERMINATION	Е

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at

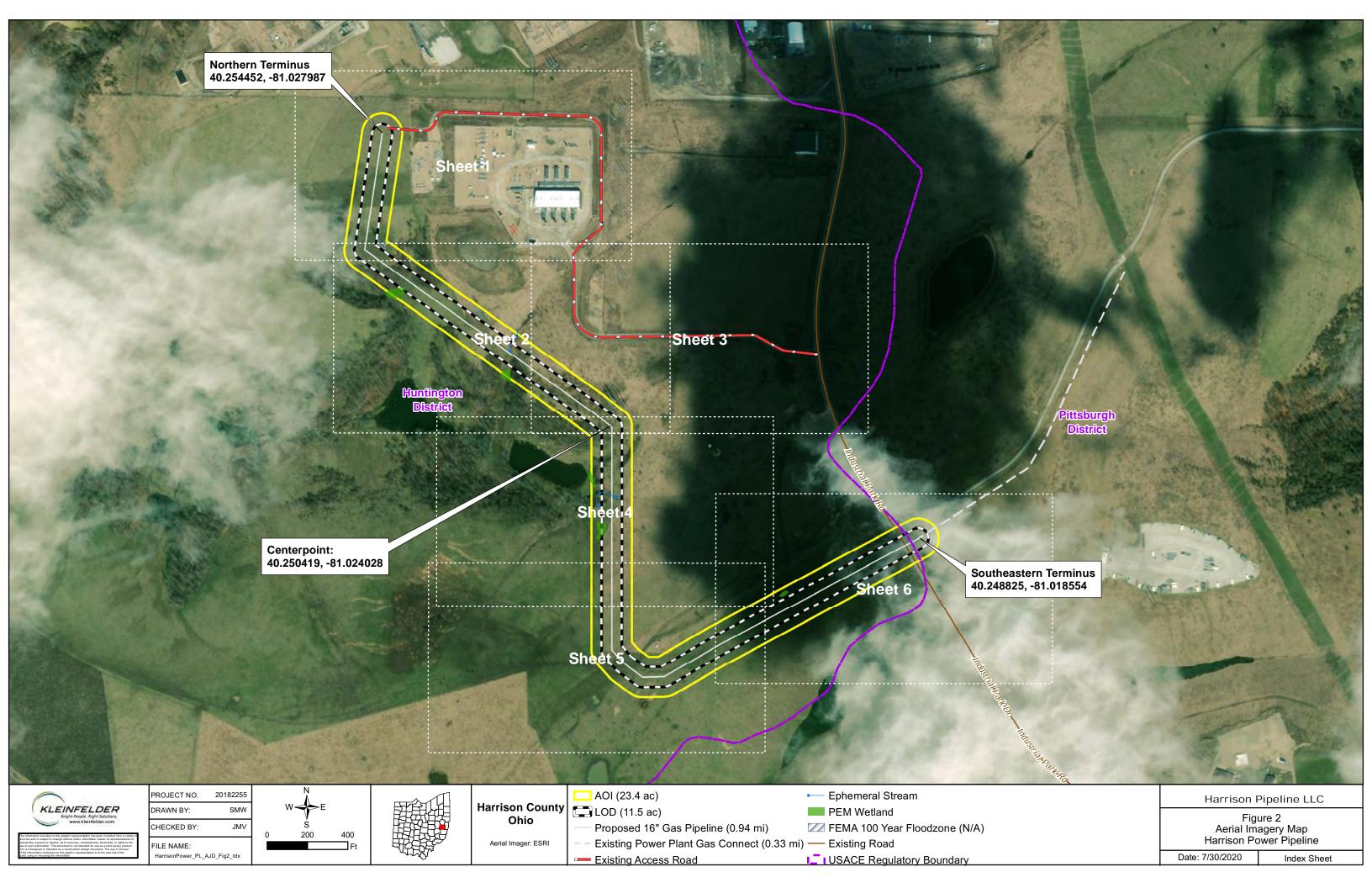
http://www.usace.army.mil/CECW/Pages/reg materials.aspx or Corps regulations at 33 CFR Part 331.

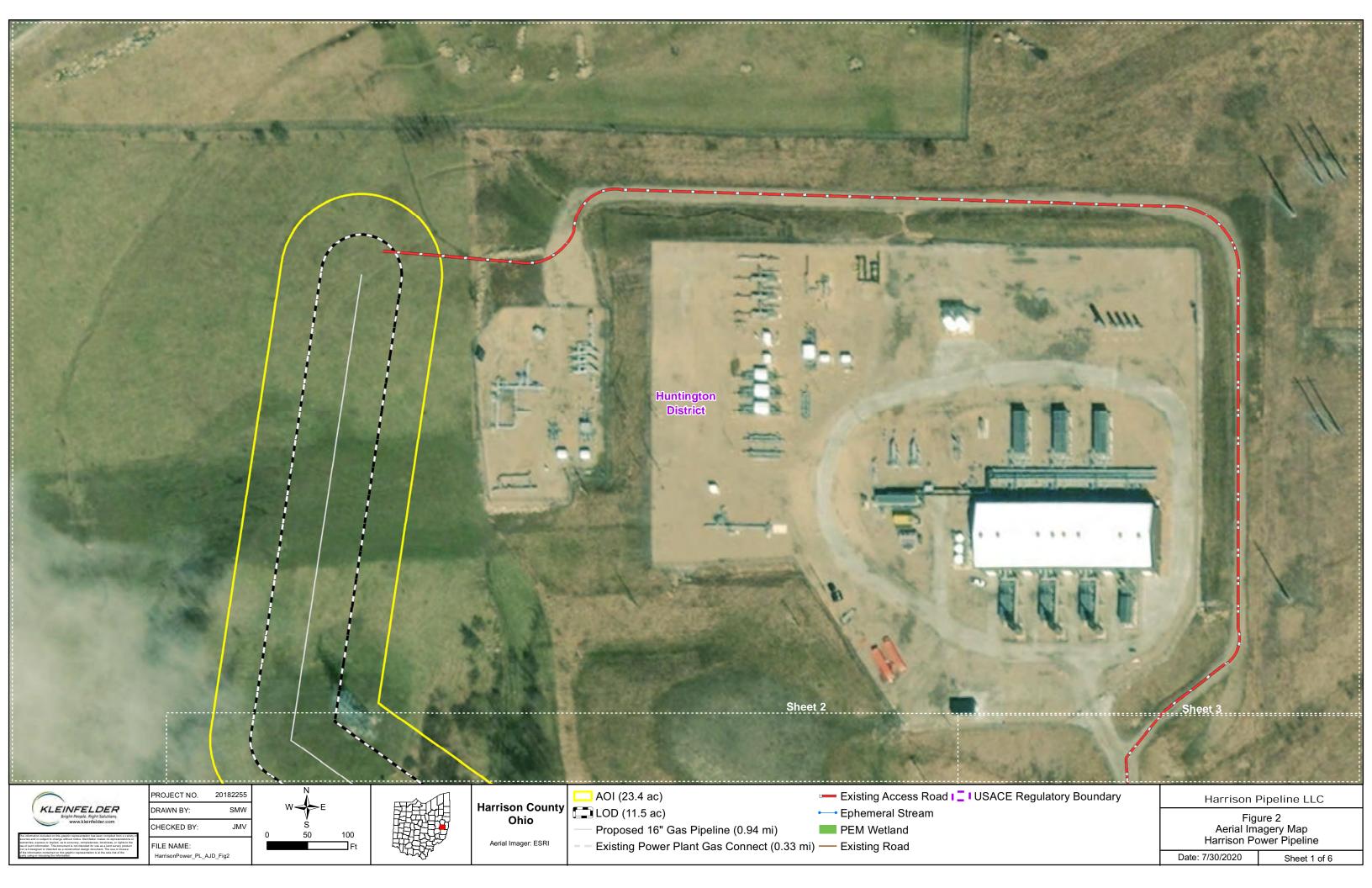
- A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

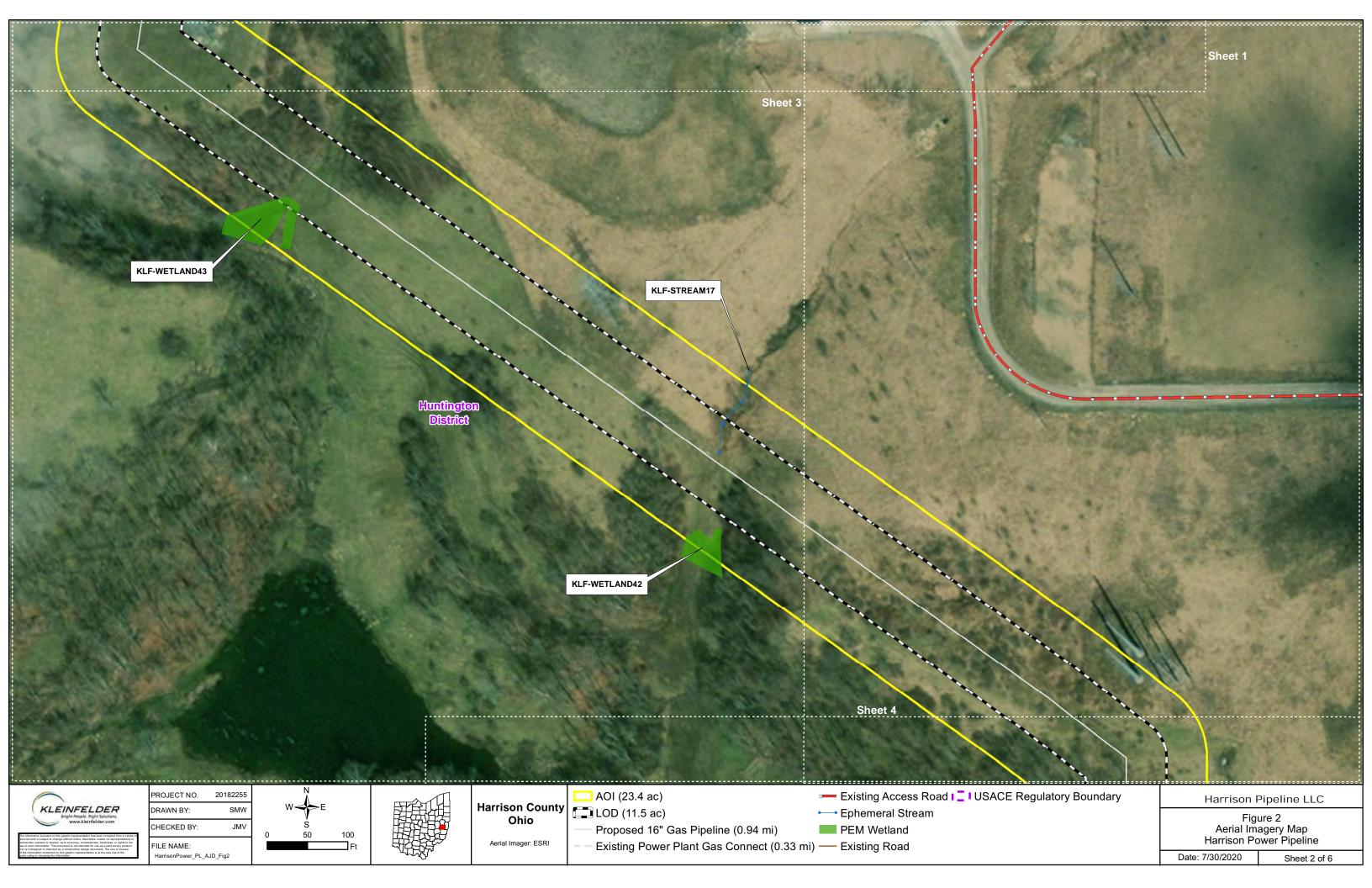
B: PROFFERED PERMIT: You may accept or appeal the permit

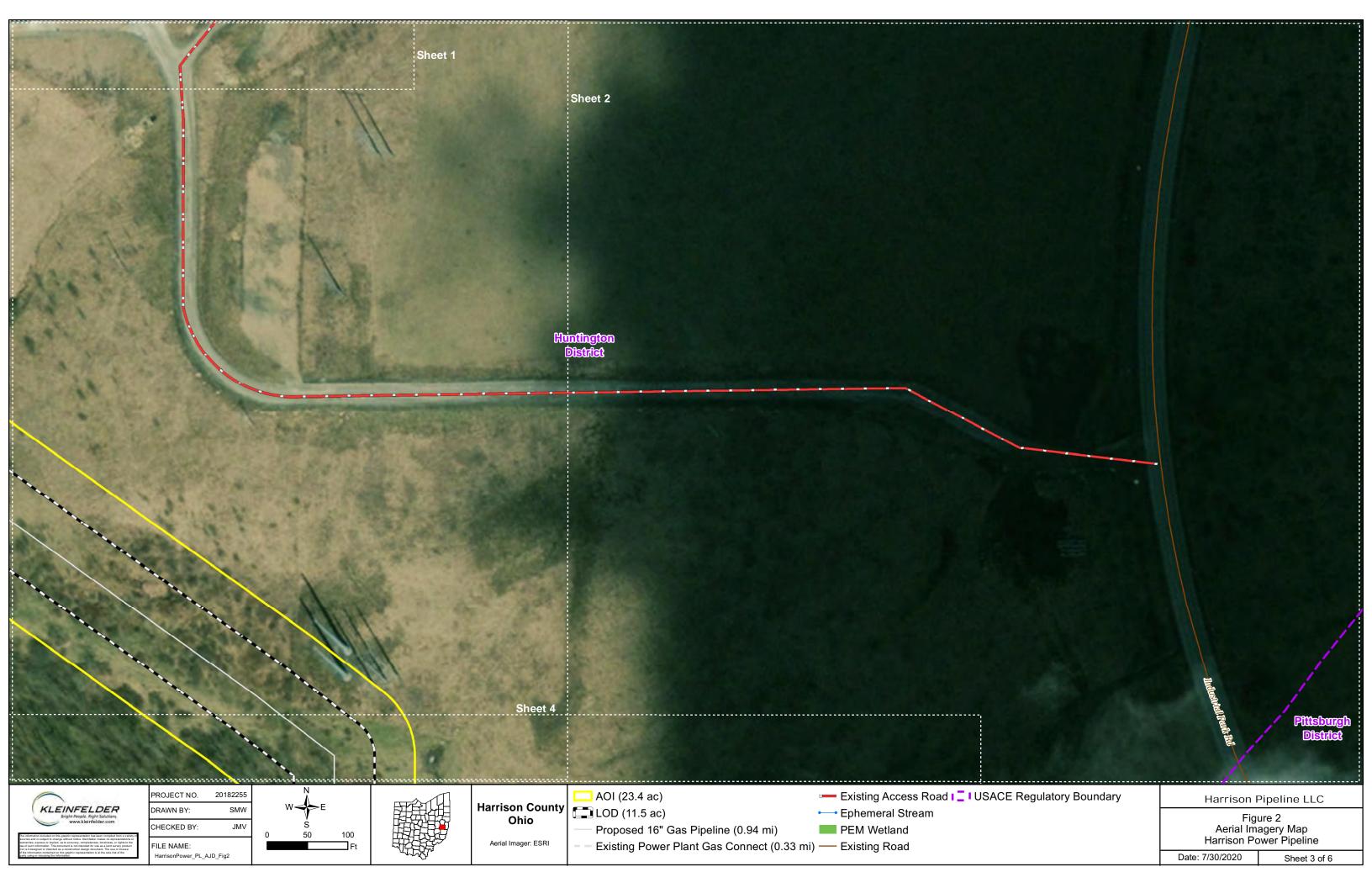
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.
- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

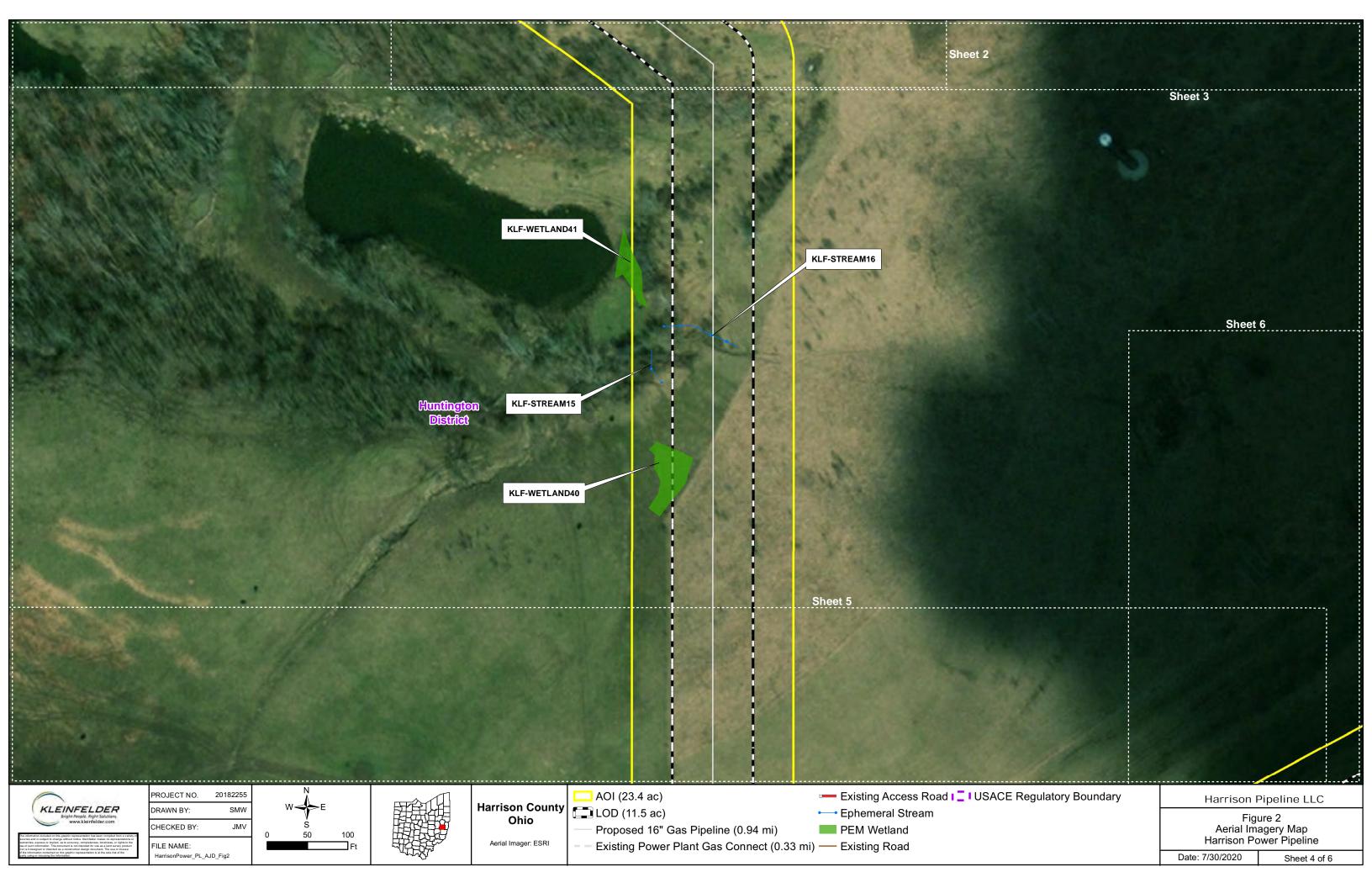
GEOMIONI II DEGLIEGE FOR ARREAT ORIEGEI		CEEDED DEDI UE
SECTION II - REQUEST FOR APPEAL or OBJECTION	ONS TO AN INITIAL PRO	FFERED PERMIT
REASONS FOR APPEAL OR OBJECTIONS: (Describ initial proffered permit in clear concise statements. You may attac or objections are addressed in the administrative record.)		
ADDITIONAL INFORMATION: The appeal is limited to a review record of the appeal conference or meeting, and any supplemental clarify the administrative record. Neither the appellant nor the Conference of the appeal	information that the review officer rps may add new information or an	r has determined is needed to nalyses to the record. However,
you may provide additional information to clarify the location of in	·	lministrative record.
POINT OF CONTACT FOR QUESTIONS OR INFOR		
If you have questions regarding this decision and/or the appeal	If you only have questions regard	ding the appeal process you may
process you may contact: Michael Hatten, Chief, Regulatory Division, 304-399-5710	also contact: Jacob Siegrist	
Teresa Spagna, Chief, North Branch, 304-399-5210	Appeal Review Officer	
Lee Robinette, Chief, Energy Resource Branch, 304-399-5610	U.S. Army Corps of Engineers	
Susan Porter, Chief, South/Transportation Branch, 304-399-5710 Address: U.S. Army Corps of Engineers	Great Lakes and Ohio River Div	ision
Regulatory Division	550 Main Street Room 10524	
502 8 th Street	Cincinnati, OH 45202-3222	684 2460
Huntington, WV 25701	TEL (513) 684-2699; FAX (513)	
RIGHT OF ENTRY: Your signature below grants the right of entropy consultants, to conduct investigations of the project site during the notice of any site investigation, and will have the opportunity to part of the project site during the notice of any site investigation, and will have the opportunity to part of the project site during the p	course of the appeal process. You	
notice of any site investigation, and win have the opportunity to pe	Date:	Telephone number:
	2400	Totophone number.
Signature of appellant or agent.		

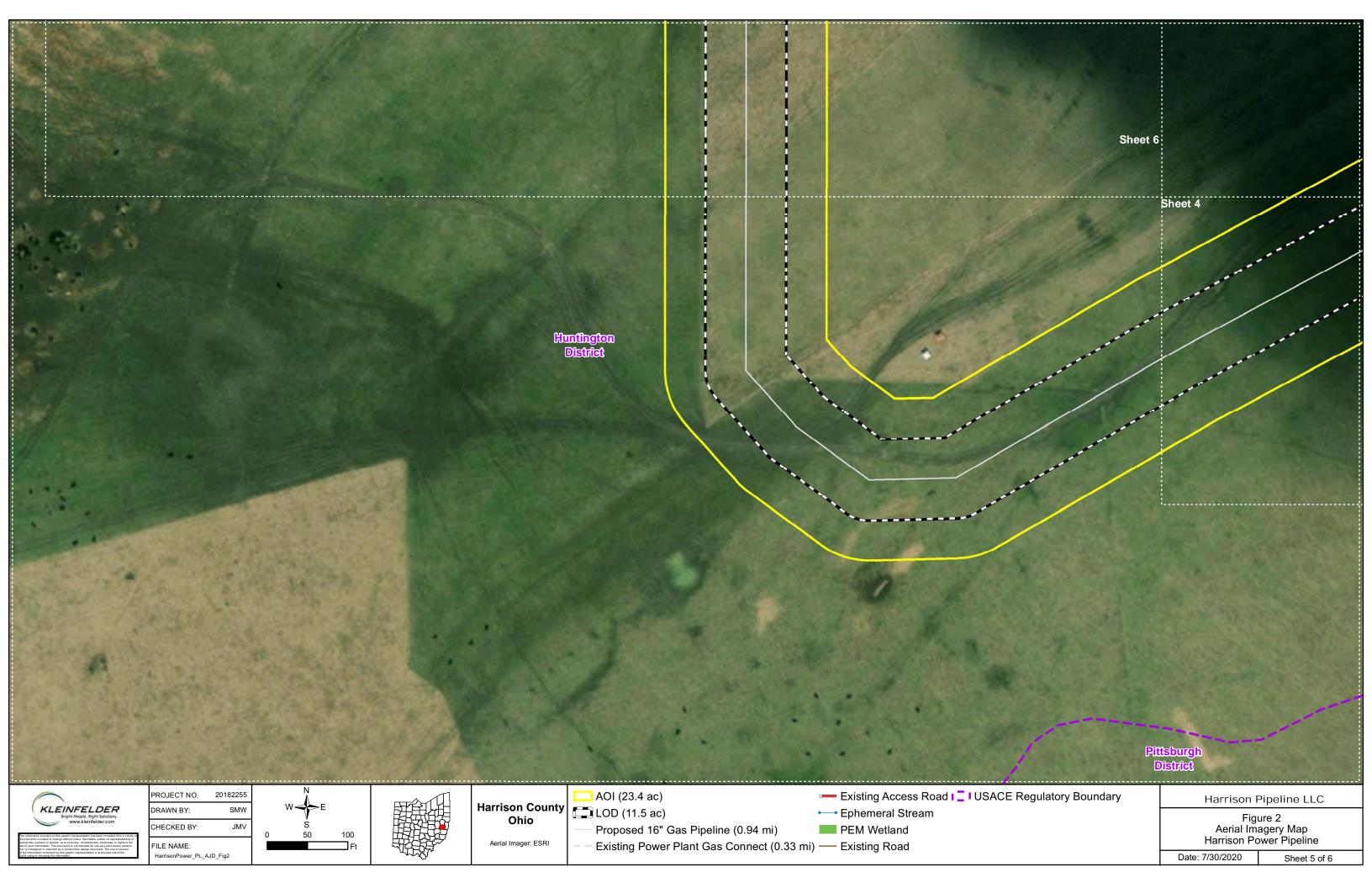


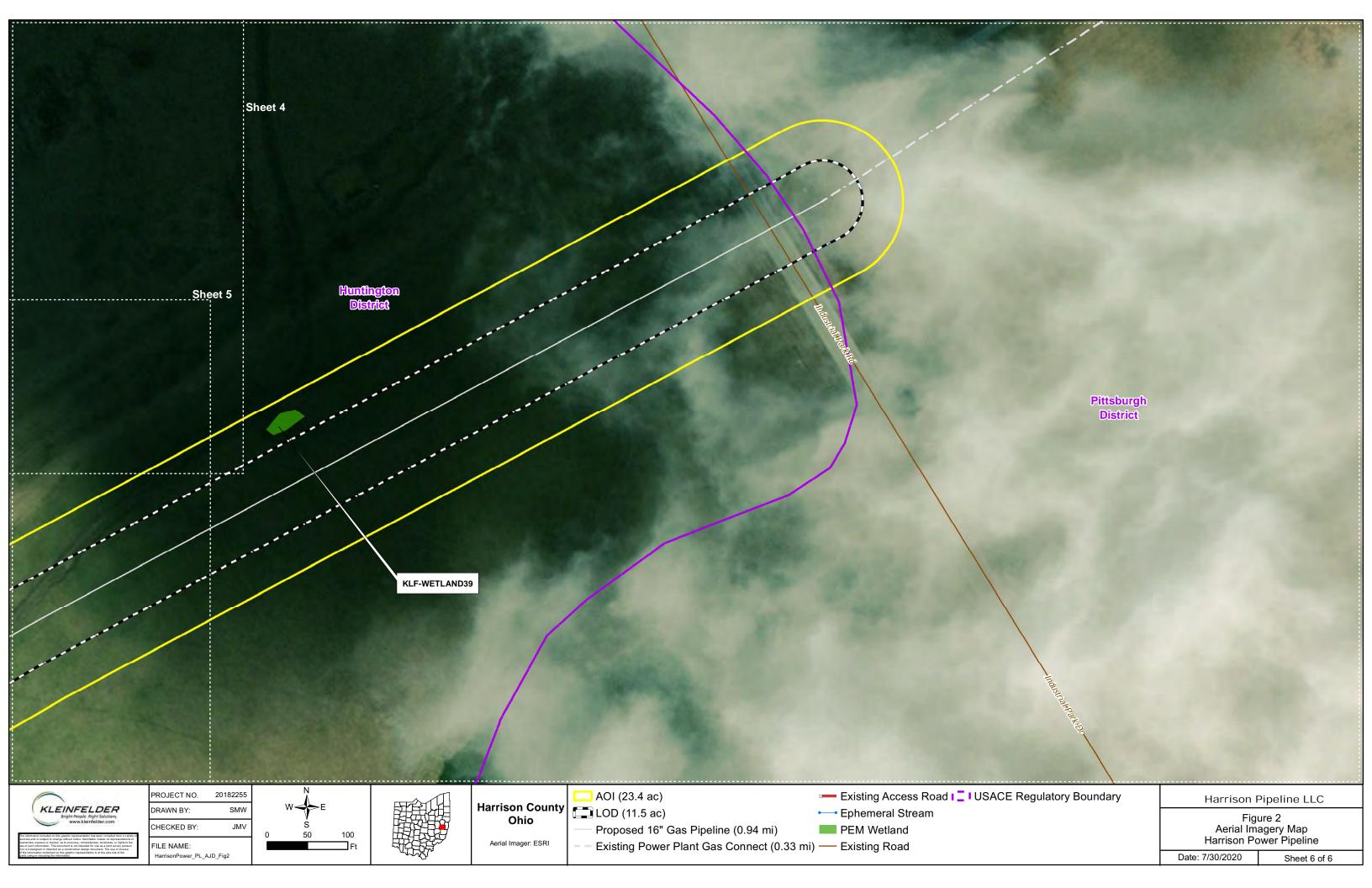












WETLAND DELINEATION AND STREAM ASSESSMENT REPORT Harrison Pipeline Company, LLC (HPC) INDUSTRIAL PARK ROAD CADIZ, OHIO

Prepared for:

Harrison Pipeline Company, LLC 10300 Town Park Drive, Suite SE1000 Houston, TX 77072

Prepared by:



APTIM 500 Penn Center Boulevard, Suite 1000 Pittsburgh, PA 15235

November 2017

Table of Contents_____

1.0	Intro	duction	1
	1.1	Site Overview	1
	1.2	Purpose	
2.0 S	ite Con	ditions	1
3.0 M	ethods		1
	3.1 5	Soils Methodology	2
	3.2 V	/egetation Methodology	3
		Hydrology Methodology	
4.0 D	esktop	Review	5
5.0 O	bserva	tions	5
		Soils	
		/egetation	
		Wetlands 1 and 2	
		Wetland 3	
		Wetlands 4 and 5	6
		Uplands 1, 2 and 3	
	5.3 H	łydrology	
		Wetlands 1 and 2	
		Wetland 3	
		Wetlands 4 and 5	7
List	of F	igures	
Figure	0.1	Project Location	
Figure		Soils Map NWI Wetlands Map	
Figure		AOI Resources Map	
riguit	5 4	AOI Resources Map	

List of Appendices_____

Appendix A Appendix B Wetland Delineation Data Forms

Photographs
ODNR and FWS Coordination Appendix C

List of Acronyms & Abbreviations

Ohio EPA Ohio Environmental Protection Agency ODNR Ohio Department of Natural Resources

1.0 Introduction

At the request of Harrison Pipeline Company, LLC (HPC) APTIM was authorized to complete a wetland delineation and stream assessment for the proposed natural gas pipeline construction in the Cadiz Industrial Park located in Cadiz, Ohio. A site investigation was completed by Mike Walor and Rebecca Clarke of APTIM on November 10 2016 and again on November 1, 2017. During the investigations, five wetlands and two streams were identified in the project area.

1.1 Site Overview

The subject property is located in Cadiz, Harrison County, Ohio, off of Industrial Park Road. The property is located wholly on reclaimed coal strip mine land, and consists of rolling hills previously used for grazing.

1.2 Purpose

APTIM was authorized in August 2017 by HPC to undertake delineation activities associated with the referenced property.

This study is to identify and delineate wetlands and streams present on site to determine possible impacts resulting from the installation of the proposed pipeline.

2.0 Site Conditions

The land on which the pipeline will be located is mildly sloping in parts and has a stream valley located on the western half of the Area of Investigation (AOI). The pipeline will continue under Industrial Park Road and continue along flat line to the Harrison Power Plant.

3.0 Methods

The site review for wetlands and the delineation of wetlands was conducted within the study area and in general accordance with the U.S. Army Corps of Engineers (USACE) 1987 Wetland Manual (Environmental Laboratory, 1987) and Eastern Mountains and Piedmont Regional Supplement (USACE, April 2012).

The identification and delineation of jurisdictional wetlands requires the evaluation of three factors, including the dominance of wetland plant species (hydrophytes), the presence of hydric soils, and evidence of hydrological conditions conducive to wetland formation and maintenance.

Ohio's Wetland Antidegradation Rule (OAC Rule 3745-1-54) categorizes wetlands based on their functions, sensitivity to disturbance, rarity and irreplaceability and scales the strictness of avoidance, minimization, and mitigation to a wetland's category. Three categories were established: Category 1 wetlands with minimal wetland function and/or integrity; Category 2 wetlands with moderate wetland function and/or integrity; and Category 3 wetlands with superior wetland function and/or integrity. Ohio EPA developed its own wetland

delineation methodology known as the Ohio Rapid Assessment method (ORAM) for wetlands. The ORAM is designed to categorize a wetland based on whether it is a particular type of wetland (e.g. fen, bog, old growth forest, etc.) or contains threatened or endangered species, or based on its "score." Recalibration of the scoring ranges using actual measures of a wetland's biology and functions has been a continuing need. The ORAM scores have therefore been calibrated by comparing wetland classes and scores with those of the Vegetation Indices of Biotic Integrity (VIBIs), which were developed for emergent, forested, and scrub-shrub wetland vegetation classes. Scoring ranges are summarized in Table 1. Wetlands at the project site were scored based on the ORAM scoring methodology.

Table 1: Interim scoring breakpoints for wetland regulatory categories for ORAM and Vegetation Index of Biotic Integrity (VIBI) scores

category	ORAM v. 5.0 score	VIBI score
1	0 - 29.9	0 - 21
1 or 2 gray zone	30 - 34.9	
modified 2	35 - 44.9	22 - 44
2	45 - 59.9	45 - 66
2 or 3	60 - 64.9	
3	65 - 100	67 - 100

3.1 Soils Methodology

For the soils parameter, a small soil pit was excavated in order to determine the presence or absence of hydric soil features in the top 6 to 24 inches of soil. The soil sample points were collected from the surface by using a sharpshooter shovel. The depth of the samples were sufficient to determine changes in upper horizons and to observe field indicators of nonhydric/hydric soils. Features such as colors indicating reducing conditions, and the presence or absence of redoximorphic features were utilized in making the determination of whether a soil was considered hydric. Munsell® Soil Color Charts were used to assign standard notations to the samples. Hydric soils are present when the soil matrix has a chroma of 1 or a chroma of 2 with mottles. Chroma colors are derived from the Munsell color charts.

Sample points were described and compared to descriptions found on the Natural Resources Conservation Service (NRCS) Web Soil Survey. According to the National Resources Conservation Service's Web Soil Survey website, two mapped soil units were present within the area of investigation, Morristown channery silty clay loam 8-25% (MoD) and Morristown channery silty clary loam 0-8% (MoB). Both soils present are rated as nonhydric.

MoB is found on hills. The natural drainage class is well drained. The soil not have the frequency to flood or pond. The NRCS does not rate this component as hydric.

MoD is found on hills. The natural drainage class is well drained. The soil does not have the frequency to flood or pond. The NRCS does not rate this component as hydric.

3.2 Vegetation Methodology

A walk-over reconnaissance of the site was conducted and a vegetation inventory was compiled. In 2006, the USACE assumed the responsibility of administering the list of wetland plants, and the list formerly administered by the U.S. Fish and Wildlife Service (USFWS) is officially obsolete. Therefore, scientific names and wetland indicator statuses for the vegetation conform to those listed in the *National Wetland Plant List:* 2014 Update of Wetland Ratings. The indicator statuses specific to the Eastern Mountains and Piedmont Region as defined by the USACE apply to the study area location.

The current definitions for vegetation wetland indicator statuses are as follows:

- · Obligate Wetland (OBL) Almost always occur in wetlands.
- Facultative Wetland (FACW) Usually occur in wetlands, but may occur in nonwetlands.
- Facultative (FAC) Occur in wetlands or non-wetlands.
- Facultative Upland (FACU) Usually occur in non-wetlands, but may occur in wetlands.
- Obligate Upland (UPL) Almost never occur in wetlands.

3.3 Hydrology Methodology

The presence, potential presence, or absence of wetland hydrology was determined in accordance with the indicators presented in the USACE supplement. The indicators are categorized into seventeen primary and twelve secondary indicators which are outlined below in Table 2.

Table 2: Wetland Hydrology Indicators for the Eastern Mountains and Piedmont Region

		Category
Indicator	Primary	Secondary
Group A - Observation of Surface	Water or Saturated S	olls
A1 - Surface water	X	
A2 - High water table	X	
A3 - Saturation	X	
Group B - Evidence of Rec	cent Inundation	
B1 - Water marks	X	
B2 - Sediment deposits	X	
B3 - Drift deposits	X	
B4 - Algal mat or crust	X	
B5 - Iron deposits	X	
B7 - Inundation visible on aerial imagery	X	
B9 - Water-stained leaves	X	-
B13 - Aquatic fauna	X	
B14 - True aquatic plants	X	
B6 - Surface soil cracks		X
B8 - Sparsely vegetated concave surface		X
B10 – Drainage patterns		X
B16 - Moss trim lines		X
Group C - Evidence of Current or	Recent Soil Saturation	on
C1 – Hydrogen sulfide odor	X	
C3 - Oxidized rhizospheres along living roots	X	
C4 - Presence of reduced iron	X	
C6 - Recent iron reduction in tilled soils	X	
C7 - Thin muck surface	X	
C2 - Dry-season water table		X
C8 - Crayfish burrows		X
C9 - Saturation visible on aerial imagery		X
Group D - Evidence from Other S	ite Conditions or Dat	ta
D1 - Stunted or stressed plants		X
D2 - Geomorphic position		X
D3 - Shallow aquitard		X
D4 - Microtopographic relief	z-1,4	X
D5 – FAC-neutral test		X

In addition to the wetland hydrology indicators listed above, the site delineation included a thorough assessment of watercourse identification. The United States Environmental Protection Agency (EPA) classifies the three different types of stream channels as:

- 1) Perennial- typically has water flowing in them year-round. Most of the water comes from smaller upstream waters or groundwater while runoff from rainfall or other precipitation is supplemental.
- 2) Intermittent- flow during certain times of the year when smaller upstream waters are flowing and when groundwater provides enough water for stream flow. Runoff from rainfall or other precipitation supplements the flow of seasonal stream. During dry periods, seasonal streams may not have flowing surface water.
- 3) Ephemeral- flow only after precipitation. Runoff from rainfall is the primary source of water for these streams.

4.0 Desktop Review

Three National Wetlands Inventory (NWI) wetlands were located within the area of investigation, but are not expected to be impacted by the project. The project overlaps two watersheds; part of the western portion of the AOI is located in the Tuscarawas River watershed, and the remainder of the AOI is located in the Upper Ohio-Wheeling watershed. Neither watershed carries any special protections.

A Natural Heritage Data Request Form was sent to the Ohio Department of Natural Resources (ODNR) and a request was made for the United States Fish and Wildlife Service (USFWS) to review potential impacts to species of concern. It was determined that no known impacts to threatened and endangered species and/or special concern species and resources were identified within the project area.

5.0 Observations

As indicated earlier in this report, the identification and delineation of jurisdictional wetlands requires the evaluation of three factors. The three factors include the dominance of wetland plant species (hydrophytes), the presence of hydric soils, and evidence of hydrological conditions conducive to wetland formation and maintenance.

Five wetlands and two streams were identified as part of this study. All of the wetlands are classified as Category 1 Palustrine Emergent (PEM) wetlands. Wetland areas are noted in Table 3.

The streams identified were both perennial streams. The total length of streams in the AOI is approximately 250 feet.

		Table 3 - Wet	land Summary		
Wetland ID	Latitude	Longitude	Classification	Total Wetland	Area (Acres)
W-1	40.249383	-81.021613	PEM	0.0	2
W-2	40.249221	-81.022004	PEM	0.1	2
W-3	40.251025	-81.021341	PEM	0.0	7
W-4	40.253537	-81.029276	PEM	0.2	5
W-5	40.25328	-81.021388	PEM	0.0	5
				Total Acreage	0.51

5.1 Soils

Eight soil pits were dug during the on-site investigation to determine the presence or absence of hydric soils.

Soil Pits W01-SP01, W02-SP02, W03-SP01 were excavated within the MoD soil series. The corresponding Munsell Soil color for the soil depth of 0"-8" in all three soil pits was Gley 1 3/10Y with 10YR 4/6 redox features. Texture was classified as silty clay loam and hydric soils were present.

Soil Pits W04-SP01 and W05-SP01 were excavated within the MoD soil series. The corresponding Munsell Soil color for the soil depth of 0"-8" was 5Y 4/1 with 7.5YR 4/6 and 10YR 4/3 redox features. The texture was classified as clay and hydric soils were present. The soil was depleted and oxidized.

Soil Pits UP-01, UP-02, and UP-03 were excavated within the MoD soil series. The corresponding Munsell soil color for the soil depth of 0"-8" was 7.5YR 4/2. The texture was classified as clay and no hydric soils were present. Soil pits were dry.

5.2 Vegetation

Hydrophytic vegetation communities and habitat types were present within Wetlands 1, 2, 3, 4, and 5. Vegetation observed during the site delineation in each wetland is listed in the inventory below:

Wetlands 1 and 2

- Spike Rush (Elocharis acicularis) OBL 10%
- Dark Green Bulrush (Scirpus atrovirens) OBL 90%

Wetland 3

- Spike Rush (Elocharis acicularis) OBL 20%
- Dark Green Bulrush (Scirpus atrovirens) OBL 80%
- Chicory (cichorium intybus) FACU 5%

Wetlands 4 and 5

- Spike Rush (Elocharis acicularis) OBL 90%
- Bitter Dock (Rumex conglomeratus) 2%
- Fowl Manna Grass (glyceria striata) 10%

Upland vegetation communities were present within the areas of Uplands 1, 2, and 3. Vegetation observed during the site delineation is listed below.

Uplands 1, 2 and 3

- Crown Vetech (Vicia Americana) FACU 90%
- Birdsfoot Trefoil (Lotus Corniculatus) FACU 10%

5.3 Hydrology

Wetlands 1 and 2

Wetlands 1 and 2 had two primary hydrology indicators, including Surface Water and Oxidized Rhizospheres on Living Roots.

Wetland 3

Wetland 3 had one primary hydrology indicator, Oxidized Rhizospheres on Living Roots.

Wetlands 4 and 5

Wetlands 4 and 5 had three primary hydrology indicators, including Algal Mat or Crust, Oxidized Rhizospheres on Living Roots, and Presence of Reduced Iron.

The streams identified on site were both perennial streams.

6.0 Evaluation

Based on field observation, it is concluded that five wetlands and two streams were present in the AOI. Total wetland area in the AOI is 0.51 acres. Total length of stream channel within the AOI is approximately 250 linear feet. This delineation represents APTIM's best professional judgement. The wetland delineation services performed by APTIM were conducted in accordance with the methodology presented in the 1987 USACE Manual and the Eastern Mountains and Piedmont Regional Supplement and with the level of care and skill ordinarily exercised by members of the environmental consulting profession. The Ohio Department of Environmental Protection (Ohio EPA) and USACE are not bound to the findings in this report.

Appendix A

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: REDUCTION	2	City/County:	adiz	Samp	oling Date:	1/1
Applicant/Owner:	7			State: Sai		WO
nvestigator(s):	C	Section, Townsh	ip, Range:			Libr
Landform (hillslope, terrace, etc.):		Local relief (concave	e, convex, none):	Slope (%	6):
Subregion (LRR or MLRA):	Lat:		_ Long:		Datum:	
Soil Map Unit Name:						
Are climatic / hydrologic conditions on	the site typical for this time	of year? Yes	No (If	no, explain in Remark	:s.)	
Are Vegetation, Soil, o				Circumstances" present		_No
Are Vegetation, Soil, o				plain any answers in R		
SUMMARY OF FINDINGS – A			oint location	s, transects, imp	ortant featu	res, etc
Hydrophytic Vegetation Present?	Yes No	Is the Sa	mpled Area	*/		
Hydric Soil Present?	Yes No	1.4.1	Wetland?	Yes N	0	
Wetland Hydrology Present?	Yes No			/		
HADDOL OCA						
HYDROLOGY				Sanandar India	animinar f t	man de - A
Wetland Hydrology Indicators:				Secondary Indicators (n		required)
Primary Indicators (minimum of one i				Surface Soil Cracks		
Surface Water (A1)		tic Plants (B14)	_	Sparsely Vegetated		ace (B8)
High Water Table (A2)		Sulfide Odor (C1)	- (00)	Drainage Patterns		
Saturation (A3)	 -	Rhizospheres on Living	g Roots (C3) _	Moss Trim Lines (B		
Water Marks (B1)		of Reduced Iron (C4)	Foils (C6)	Dry-Season WaterCrayfish Burrows (
Sediment Deposits (B2)		on Reduction in Tilled S	30lis (C0) _	Saturation Visible of		w (C0)
Drift Deposits (B3)		s Surface (C7) plain in Remarks)	-	Stunted or Stresse	_	y (C3)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Ext	plain in Kelliaks)	-	Geomorphic Position		
Inundation Visible on Aerial Imag	nery (R7)		-	Shallow Aquitard (I		
Water-Stained Leaves (B9)	gery (D7)		_	Microtopographic F		
Aquatic Fauna (B13)			_	FAC-Neutral Test (
Field Observations:			_		,	
	X No Depth (in	ches): 7				
	No Depth (in				,	
	No Depth (in		Wetland Hy	drology Present? Y	Yes X No	0
(includes capillary fringe)			-	-		
Describe Recorded Data (stream gar	uge, monitoring well, aerial	photos, previous inspe	ections), if availa	able:		
Remarks:						
b t	ed matrix					
Keau (ed mathy	e nother	ad mal	- The		
	(I (V) I V) OHUIL	24 1001	5.		

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: VOI - SPO)

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Species
1,		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		(-/
		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
	= Total Cover	Total % Cover of: Multiply by:
50% of tetal cover:	20% of total cover:	-
Sapling Stratum (Plot size: 20		OBL species x 1 =
		FACW species x 2 =
1,		FAC species x 3 =
2		FACU species x 4 =
3		UPL species x 5 =
4		Column Totals: (A) (B)
5		(-)
6		Prevalence Index = B/A =
	= Total Cover	Hydrophytic Vegetation Indicators:
50% of total cover:	20% of total cover:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size:		2 - Dominance Test is >50%
- //		3 - Prevalence Index is ≤3.0 ¹
		4 - Morphological Adaptations¹ (Provide supporting
2		data in Remarks or on a separate sheet)
3		Problematic Hydrophytic Vegetation¹ (Explain)
4		
5		¹ Indicators of hydric soil and wetland hydrology must
6		be present, unless disturbed or problematic.
	= Total Cover	Definitions of Five Vegetation Strata:
		Dominion Division Condition
E00/ of total cover:	20% of total cover:	
	20% of total cover:	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size:)		approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 15)		
Herb Stratum (Plot size:)		approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 15)		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Herb Stratum (Plot size: 15) 1. Spikerush Crechans acid 2. Dark averh 911/11/15/19		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 15) acid 1. Spicerus ni Clerchans acid 2. Dan green gurus ha 3.		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Herb Stratum (Plot size: 15) 1. Spicerus Clebenars acid 2. Dank green gunshig 3. 4. 5.	Alais)10% OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Herb Stratum (Plot size: 15) acid 1. Spikerus Niciennas acid 2. Dank green gurushig 3. 4. 5. 6. 6.	Apis 910% Y OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Herb Stratum (Plot size: 15) acid 2. DANK GYERN GUNUSHER 3. 4. 5. 6. 7	Alavis) 10% OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including
Herb Stratum (Plot size: 15) acid 1. Spikerus Niciennas acid 2. Dank green gurushig 3. 4. 5. 6. 6.	Alavis) 10% OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
Herb Stratum (Plot size: 15) acid 2. DANK GYERN GUNUSHER 3. 4. 5. 6. 7	aulavis) 10% OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including
Herb Stratum (Plot size: 15) acid 1. Spicerus nicleanans acid 2. Dan green gurus nicleanans acid 3. 4. 5. 6. 7. 8. 8.	Apis 910% Y OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 15) 1. Spicerus Niciennas acid 2. Dank green gurus high 3. 4. 5. 6	Apis 910% Y OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
Herb Stratum (Plot size: 15) acid 2. DANK GOLD GUILLONG ACID 3. 4. 5. 6. 7. 8. 9. 10	Apis 910% Y OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 15) acid 2. Dhark green 90005016 3. 4. 5. 6	Mais 10 / OBI	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 15) acid 2. DANG GER GUNDS ACID 3. 4. 5. 6	= Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:) acid 2	= Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 1	OB OB OB OB OB OB OB OB	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)	Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 1	Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)	Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)	Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size:) acid 1.	Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size:	Total Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size:	= Total Cover 20% of total cover: 20% of total cover:	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height. Hydrophytic Vegetation

Sampling Point: WOZ SPOI

Depth	Matrix			Features					
inches)	Color (moist)	1	Color (moist)	% Type	Loc ²	Textu	re I a a	Remark	S
1.8	Gleu 1 3/	104 95/0	INKAN	0 5	PL	<u>_S</u>	TUCION	odyn	
) /		1		1		1		
						-			
						-			
			_			-			
			10			-			
	ncentration, D=Depl	etion, RM=Red	luced Matrix, MS:	=Masked Sand	Grains.			Lining, M=Matr	
ydric Soil Ir						'		r Problematic	_
Histosol (_	_ Dark Surface (/AN DA 447	440)		k (A10) (MLRA	
	ipedon (A2)	-		ow Surface (S8		, 148) _	_	airie Redox (A1	0)
Black His		7	Loamy Gleyed	face (S9) (MLR	A 147, 140)		-	. 147, 148) : Floodplain Soi	ile (F19)
	n Sulfide (A4) Layers (A5)	4	Coarny Gleyed Depleted Matr			-	_	. 136, 147)	10 (1 13)
	ck (A10) (LRR N)	-	_ Redox Dark S					llow Dark Surfa	ice (TF12)
_	Below Dark Surface	(A11)	_ Depleted Dark			_		plain in Remar	
	rk Surface (A12)	`´´\	'	, ,					
Sandy Mu	ucky Mineral (S1) (L	RR N,	_ Iron-Mangane	se Masses (F1	2) (LRR N,				
MLRA	147, 148)		MLRA 136	•					
	eyed Matrix (S4)	_		æ (F13) (MLRA				of hydrophytic v	_
_ Sandy Re		_		odplain Soils (F			-	drology must b	
	Matrix (S6)	_	_ Red Parent M	aterial (F21) (M	LRA 127, 147	7)	unless dist	urbed or proble	ematic.
	ayer (if observed):	1ctrin.	Mined +	D rock					
Туре:	100	Gun	11/11/10 Por)	l		/	
Depth (inc	hes):		1			Hydrid	Soil Presen	t? Yes 🔍	No
temarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: PROUDIC	City/C	County: Cadi Z		Sampling Date:
Applicant/Owner:			State:	_ Sampling Point: / WOD
Investigator(s): PCC	Section	on, Township, Range:		
Landform (hillslope, terrace, etc.):				
Subregion (LRR or MLRA):				
Soil Map Unit Name:				
Are climatic / hydrologic conditions on the site typ	oical for this time of year?			
Are Vegetation, Soil, or Hydrology				resent? Yes No
Are Vegetation, Soil, or Hydrology			xplain any answer	rs in Remarks.)
SUMMARY OF FINDINGS – Attach si			ns, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes _	No	Is the Sampled Area		
Hydric Soil Present? Yes _	No	within a Wetland?	Yes 🔀	No
Wetland Hydrology Present? Yes _	No			
Remarks:	Ĺ			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply)		Surface Soil	
	True Aquatic Plants		_	getated Concave Surface (B8)
Surface Water (A1) High Water Table (A2)	Hydrogen Sulfide Od		Drainage Pat	
Saturation (A3)	✓ Oxidized Rhizospher		_	
Water Marks (B1)	Presence of Reduce	_		Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction		Crayfish Burn	
Drift Deposits (B3)	Thin Muck Surface (sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rei			ressed Plants (D1)
Iron Deposits (B5)			Geomorphic	Position (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aqui	tard (D3)
Water-Stained Leaves (B9)			Microtopogra	phic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
Surface Water Present? Yes No	Depth (inches):			
Water Table Present? Yes No	Depth (inches):			_
Saturation Present? Yes No	Depth (inches):	Wetland H	lydrology Presen	t? Yes No
(includes capillary fringe)	Karaman and Alabatan and	uieus inenestians) if sue	ilabla	
Describe Recorded Data (stream gauge, monito	ning well, aerial photos, pre	evious inspections), ii ava	liable:	
Remarks:				

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point:_____

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Species
1		That Are OBL, FACW, or FAC:(A)
2		
		Total Number of Dominant Species Across All Strata: (B)
3		Species Across Air Strata.
4		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
	= Total Cover	
50% of total cover:	20% of total cover:	Total % Cover of: Multiply by:
Sapling Stratum (Plot size:		OBL species x 1 =
		FACW species x 2 =
1		FAC species x 3 =
2		FACU species x 4 =
3		UPL species x 5 =
4		Column Totals: (A) (B)
5		(2)
6		Prevalence Index = B/A =
	= Total Cover	Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
	20% of total cover:	
Shrub Stratum (Plot size:30		2 - Dominance Test is >50%
1,		3 - Prevalence Index is ≤3.0¹
2.		4 - Morphological Adaptations¹ (Provide supporting
3,		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation ¹ (Explain)
4		
5		¹ Indicators of hydric soil and wetland hydrology must
6		be present, unless disturbed or problematic.
	= Total Cover	Definitions of Five Vegetation Strata:
50% of total cover:	20% of total cover:	Tree - Woody plants, excluding woody vines,
		approximately 20 ft (6 m) or more in height and 3 in.
1. SPIKENUS / ELECTRICS AUC	culture) OBI	(7.6 cm) or larger in diameter at breast height (DBH).
2 Days ensory bulliagn / scinus	HIMIBINGO Y DIZI	1
The state of the s	Must S EAC	Sapling – Woody plants, excluding woody vines, åapproximately 20 ft (6 m) or more in height and less
3. chicory (Cichonum inti	100	
4	1	"I than 3 in. (7.6 cm) DBH.
		than 3 in. (7.6 cm) DBH.
5		Shrub – Woody plants, excluding woody vines,
5		
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6 7		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
6	= Total Cover 20% of total cover:	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.

Sampling Point: W03-

Depth Matrix	th needed to document the indicator or confirm Redox Features	
pepth Matrix nches) Color (moist) %	Color (maist) % Type¹ Loc²	Texture Remarks
5-6 GIPU 1 3/14/017	PI INYVUIL A PI	SILTYCLAY
0-0 0141 1 11401.	1012 110	- loan
		
vpe: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	✓ Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N,	Cyon-Manganese Masses (F12) (LRR N,	
MLRA 147, 148)	MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14	wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.
estrictive Layer (if observed):	and Mind	
	STILL A TUNGER	
Type: YOCK OURA		
Type.		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Depth (inches):		Hydric Soil Present? Yes X No
Type.		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No No
Depth (inches):		Hydric Soil Present? Yes X No

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site:	uplic	City/C	county: COID 2		Sampling Date:	117
Applicant/Owner:	VCC			State:	_ Sampling Point: / W	041-
Investigator(s):		Section	on, Township, Range: _		N	15,-6
Landform (hillslope, terrace, etc.):		Local reli	ef (concave, convex, no	ne):	Slope (%):	
Subregion (LRR or MLRA):	Lat:		Long:		Datum:	
Soil Map Unit Name:				NWI classific	ation:	
Are climatic / hydrologic conditions	on the site typical for	or this time of year? Y	es No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil	_, or Hydrology	significantly distur	bed? Are "Norma	al Circumstances" p	resent? Yes No_	
Are Vegetation, Soil				explain any answer	rs in Remarks.)	
SUMMARY OF FINDINGS	- Attach site m	ap showing sam	pling point locati	ons, transects	, important features,	etc.
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area			
Hydric Soil Present?		_ No	within a Wetland?	Yes	No	
Wetland Hydrology Present?	Yes	_ No				
HYDROLOGY						
Wetland Hydrology Indicators:				Secondary Indica	tors (minimum of two requi	red)
Primary Indicators (minimum of o	ne is required; check	k all that apply)		Surface Soil	Cracks (B6)	
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (I					38)	
High Water Table (A2)						
Saturation (A3)	×	Oxidized Rhizospher	es on Living Roots (C3)	Moss Trim Li	nes (B16)	
Water Marks (B1)	4	Presence of Reduced	l Iron (C4)	Dry-Season \	Water Table (C2)	
Sediment Deposits (B2)	_	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burr		. 1
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9	3)
Algal Mat or Crust (B4)	_	Other (Explain in Rer	marks)		ressed Plants (D1)	
Iron Deposits (B5)	(5.7)			Geomorphic		(
Inundation Visible on Aerial I	magery (B7)			Shallow Aqui		
Water-Stained Leaves (B9)				FAC-Neutral	phic Relief (D4)	
Aquatic Fauna (B13)			-	FAC-Neutral	Test (D5)	
Field Observations:		Depth (inches):				
		Depth (inches):		Hadaalaan Daaaan	t? Yes 🔀 No	
Saturation Present? Ye (includes capillary fringe)	esNo_	Depth (inches):	wetland	Hydrology Presen	t? Yes NO	_
Describe Recorded Data (stream	gauge, monitoring v	vell, aerial photos, pre	vious inspections), if av	ailable:		
Remarks:						
RPA	u ced.	WIDOTN X	, oxdized	1005		
1		I a about) 01.00	H Tark		

2-0	Absolute	Dominant Indica	tor Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1		Species? Stat	Number of Borninant Species
2			Total Number of Dominant Species Across All Strata: (B)
4			
5			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		= Total Cover	Prevalence Index worksheet:
50% of total cover:	20% of	total cover:	Total % Cover of: Multiply by:
Sapling Stratum (Plot size:)			OBL species x i =
1			FACW species x 2 =
2			FAC species x s
3			FACU species x 4 =
4			UPL species x 5 =
5			Column Totals: (A) (B)
6			Prevalence Index = B/A =
		= Total Cover	Hydrophytic Vegetation Indicators:
50% of total cover:	_ 20% of	total cover:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: <u>30</u>			2 - Dominance Test is >50%
1,			3 - Prevalence Index is ≤3.0¹
2			4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
3			Problematic Hydrophytic Vegetation¹ (Explain)
4			
5			Indicators of hydric soil and wetland hydrology must
6			be present, unless disturbed or problematic.
		= Total Cover	Definitions of Five Vegetation Strata:
50% of total cover:			Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size:)	1000	V	approximately 20 ft (6 m) or more in height and 3 in.
	Nans)	7 1	(7.6 cm) or larger in diameter at breast height (DBH).
2. Billow dock Kumpy conginger 3. Four Manina grass arycon	alus	10/0 1	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
4	- Olivia and		than 3 in. (7.6 cm) DBH.
5			Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7			Herb - All herbaceous (non-woody) plants, including
8			herbaceous vines, regardless of size, and woody
9			plants, except woody vines, less than approximately 3 ft (1 m) in height.
10			Woody vine – All woody vines, regardless of height.
11			**************************************
		= Total Cover	i i
50% of total cover:	_ 20% of	total cover:	_
Woody Vine Stratum (Plot size:)			1//
1			
2			
3			_
4			_
5			Hydrophytic
		= Total Cover	Vegetation
		1000.0010.	Present? Yes No

50% of total cover: _____ 20% of total cover:

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

	th needed to document the indicator or confire	in the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
11-6 54 411 90	7.548 4/6 1 RM PL	Clay
	10404/2 2 PM)
	1010119	·
		·
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148)	MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 1	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 14	(7) unless disturbed or problematic.
Restrictive Layer (if observed):		
		N. A. A. A. A. A. A. A. A. A. A. A. A. A.
Restrictive Layer (if observed):		Hydric Soil Present? Yes No
Restrictive Layer (if observed): Type: 200		Hydric Soil Present? Yes No
Restrictive Layer (if observed): Type: O C Depth (inches): S		Hydric Soil Present? Yes No
Restrictive Layer (if observed): Type: O C Depth (inches): S		Hydric Soil Present? Yes No
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0	leted & oxidiz	1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		1
Restrictive Layer (if observed): Type: 0		
Restrictive Layer (if observed): Type: 0		
Restrictive Layer (if observed): Type: 0		1

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Pepo	chlic	City	County: Carliz	2	Sampling Date:	11	
Applicant/Owner:					Sampling Point:	D	
Investigator(s):	0	Sec	tion, Township, Range:		, ,	(
Landform (hillslope, terrace, etc	c.):					u	
Subregion (LRR or MLRA):							
Soil Map Unit Name:						U	
Are climatic / hydrologic conditi							
Are Vegetation, Soil	• •	_			present? Yes 🔀 N	Vo.	
Are Vegetation, Soil				explain any answe			
SUMMARY OF FINDING						es, etc	
Hydrophytic Vegetation Prese	ent? Yes	No	Is the Sampled Area		<u> </u>		
Hydric Soil Present?		No	within a Wetland?	Yes No			
Wetland Hydrology Present?	Yes	No					
HYDROLOGY							
Wetland Hydrology Indicato	rs:			Secondary Indic	ators (minimum of two re	quired)	
Primary Indicators (minimum	of one is required; che	eck all that apply)		Surface Soil Cracks (B6)			
Surface Water (A1) True Aquatic Plants (B14)			(B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	_	Hydrogen Sulfide Odor (C1)			Drainage Patterns (B10)		
Saturation (A3)	_	_ Oxidized Rhizosphe	eres on Living Roots (C3)	Moss Trim L	ines (B16)		
Water Marks (B1)	·	_ Presence of Reduce	ed Iron (C4)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	_		ion in Tilled Soils (C6)	Crayfish Bu			
Drift Deposits (B3)	_	_ Thin Muck Surface			isible on Aerial Imagery	(C9)	
Algal Mat or Crust (B4) Other (Explain in Remarks)			emarks)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)					Position (D2)		
Inundation Visible on Aer	• •			Shallow Aqu			
Water-Stained Leaves (B	9)				aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutra	Trest (D5)		
Field Observations:		S					
Surface Water Present?		Depth (inches):					
Water Table Present?	Yes No	Depth (inches):				X	
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	wetland F	1yarology Prese	nt? Yes No_		
Describe Recorded Data (stre	am gauge, monitoring	g well, aerial photos, p	revious inspections), if ava	ailable:			
Remarks:							

/EGETATION (Five Strata) - Use scientific		Dominant Indicator	Sampling Point:
Tree Stratum (Plot size:) 1	% Cover	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2			
3			Total Number of Dominant Species Across All Strata: (B)
4			
5			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6			That Are OBE, FACW, OF FAC.
		= Total Cover	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
50% of total cover:	20% 01	total cover:	OBL species x 1 =
Sapling Stratum (Plot size:			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3			UPL species x 5 =
4			Column Totals: (A) (B)
5		$\overline{}$	
6			Prevalence Index = B/A =
	-	= Total Cover	Hydrophytic Vegetation Indicators:
50% of total cover:	20% of	total cover:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size:)			2 - Dominance Test is >50%
1,			3 - Prevalence Index is ≤3.0 ¹
2			4 - Morphological Adaptations (Provide supporting
3,			data in Remarks or on a separate sheet)
4			Problematic Hydrophytic Vegetation ¹ (Explain)
5			1
6			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cover	Definitions of Five Vegetation Strata:
50% of total cover:	20% of	total cover	
Herb Stratum (Plot size:	207001		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1 CLOWN WATCH MICH T	tmerica	100 90% Y 8	47.6 cm) or larger in diameter at breast height (DBH).
2 Parasfrot tropo 1 /1 otis corni	relation	15% X FAC	1111
2 miles to the family	ma vy	17.0	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
3 4			than 3 in. (7.6 cm) DBH.
f			Shrub Moody plants evaluding woody vines
0,			Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6			
7		·——	Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8,			plants, except woody vines, less than approximately 3
9			ft (1 m) in height.
10			Woody vine - All woody vines, regardless of height.
11,			, , , , , , , , , , , , , , , , , , , ,
		= Total Cover	
50% of total cover:	20% of	total cover:	
Woody Vine Stratum (Plot size:)			
1,			
2			14
0			

= Total Cover

20% of total cover:_

50% of total cover: __

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

Hydrophytic Vegetation Present?

Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Color (moist) % Type¹ Loc² (inches) Color (moist) Texture Remarks 100 ²Location: PL=Pore Lining, M=Matrix. ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators for Problematic Hydric Soils³: Hydric Soil Indicators: _ 2 cm Muck (A10) (MLRA 147) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Stratified Layers (A5) Depleted Matrix (F3) Very Shallow Dark Surface (TF12) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³Indicators of hydrophytic vegetation and Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Sandy Redox (S5) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Remarks:





Client: Harrison Pipeline Company, LLC

Location: Cadiz, OH

Prepared by: APTIM

Photographic Record

Photograph No. 1

Date: 11/10/2016 Direction: West Description: The ephemeral stream facing west.



Photograph No. 2

Date: 11/10/2016
Direction: North
Description: View
of the wetland
facing north
showing
vegetation.





Client: Harrison Pipeline Company, LLC

Location: Cadiz, OH

Prepared by: APTIM

Photographic Record

Photograph No. 3

Date: 11/10/2016
Direction: North
Description: View
of the wetland
facing north
showing
vegetation.



Photograph No. 4

Date: 11/10/2016
Direction: South
Description: View
of the wetland
facing south
showing
vegetation.





Client: Harrison Pipeline Company, LLC

Location: Cadiz, OH

Prepared by: APTIM

Photographic Record

Photograph No. 5

Date: 11/10/2016
Direction: West
Description: View
of the wetland
facing west
showing
vegetation.







Ohio Department of Natural Resources

JOHN R. KASIETE GOVERNOR

JAMES ZEHRRNGER, DIRECTOR

Ohio Division of Wildlife Raymond W. Petering, Chief 2045 Morse Rd., Bldg. G Columbus, OH 43229-6693 Phone: (614) 265-6300

November 28, 2016

Rebecca Clarke CB&I 500 Penn Center Blvd. Pittsburgh, PA 15235

Dear Ms. Clarke,

After reviewing the Natural Heritage Database, I find the Division of Wildlife has no records of rare or endangered species in the Harrison Power Electric Generating Facility project area, including a one mile radius, in Cadiz Township, Harrison County, Ohio. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke

Ohio Natural Heritage Database Program

Debbie Woischhe

From: <u>susan zimmermann@fws.gov</u> on behalf of <u>Ohio, FW3</u>

To: Clarke, Rebecca

Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us

Subject: Harrison Power LLC Project (New CCGT Facility) Harrison Co.

Date: Monday, October 30, 2017 11:21:35 AM

Attachments: Capture of Dan.PNG



UNITED STATES DEPARTMENT OF THE INTERIOR U.S. Fish and Wildlife Service Ecological Services Office 4625 Morse Road, Suite 104 Columbus, Ohio 43230

(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2018-TA-0118

Dear Ms. Clarke,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered Indiana bat (Myotis sodalis) and the federally threatened northern long-eared bat (Myotis septentrionalis). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags = 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

Should the proposed site contain trees =3 inches dbh, we recommend that trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees =3 inches dbh cannot be avoided, we recommend that removal of any trees =3 inches dbh only occur between October 1 and March 31. Seasonal clearing is being recommended to avoid adverse effects to Indiana bats and northern longeared bats. While incidental take of northern longeared bats from most tree clearing is exempted by a 4(d) rule (see http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, summer surveys may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer. If a summer survey documents probable absence of Indiana bats, the 4(d) rule for the northern long-eared bat could be applied. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office. Surveyors must have a valid federal permit. Please note that summer surveys may only be conducted between June 1 and August 15.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

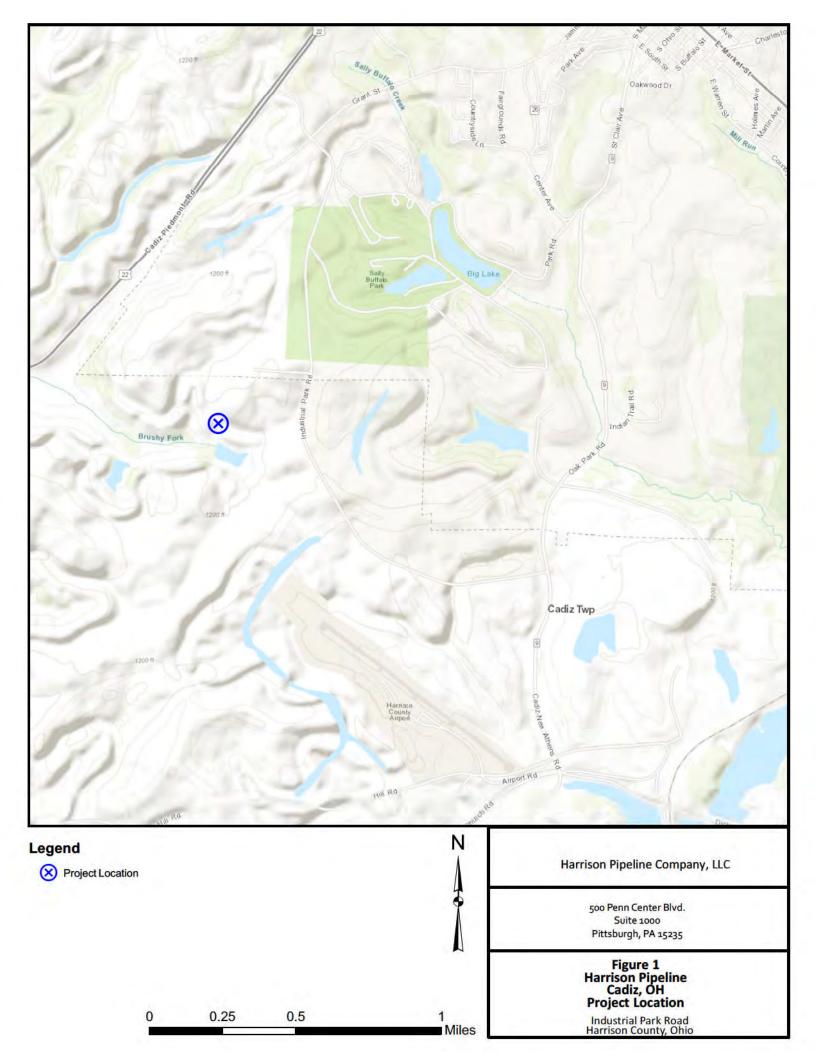
Dan Everson

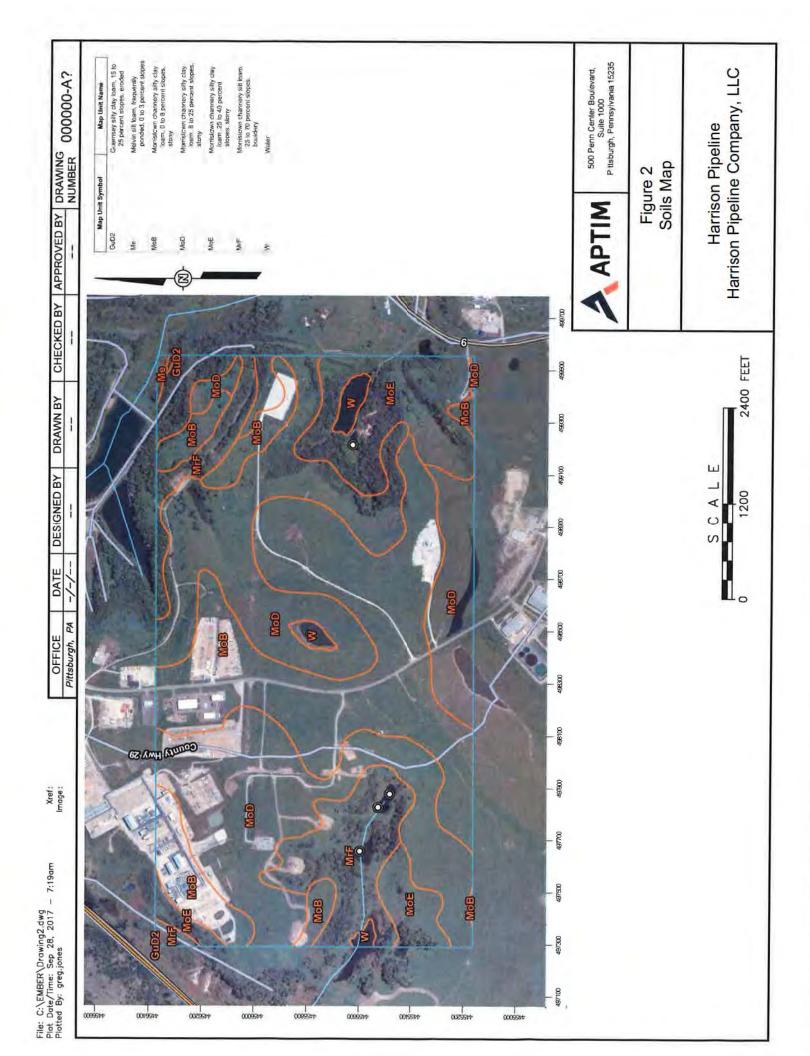
Field Supervisor

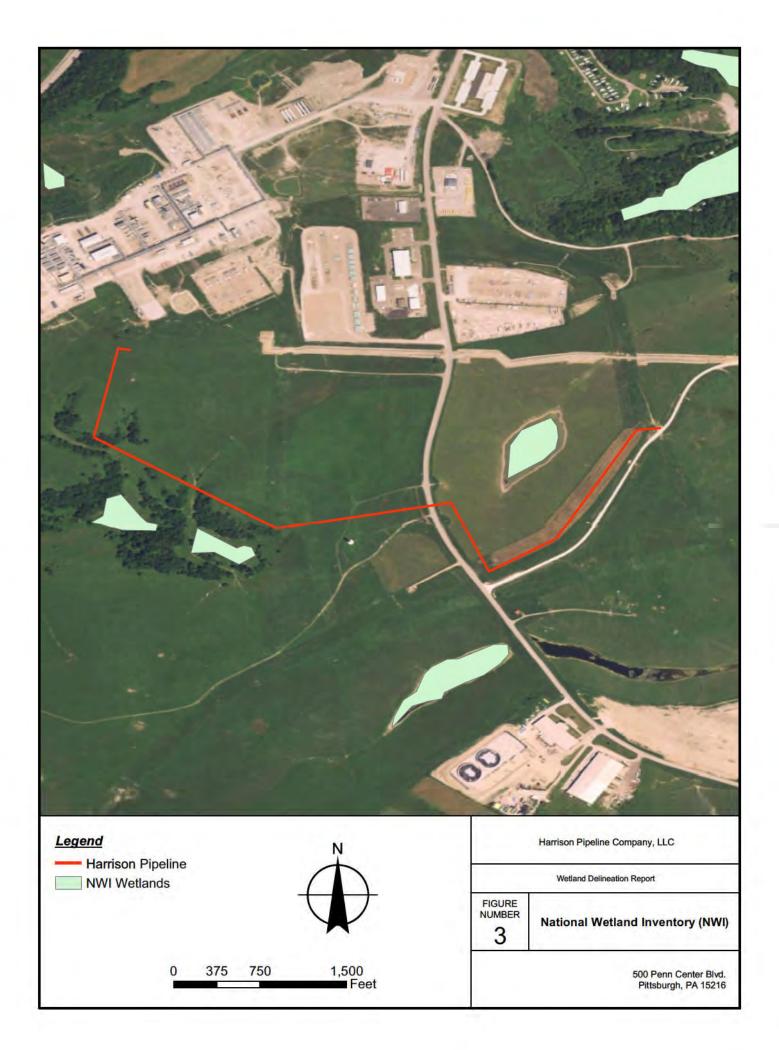
cc: Nathan Reardon, ODNR-DOW

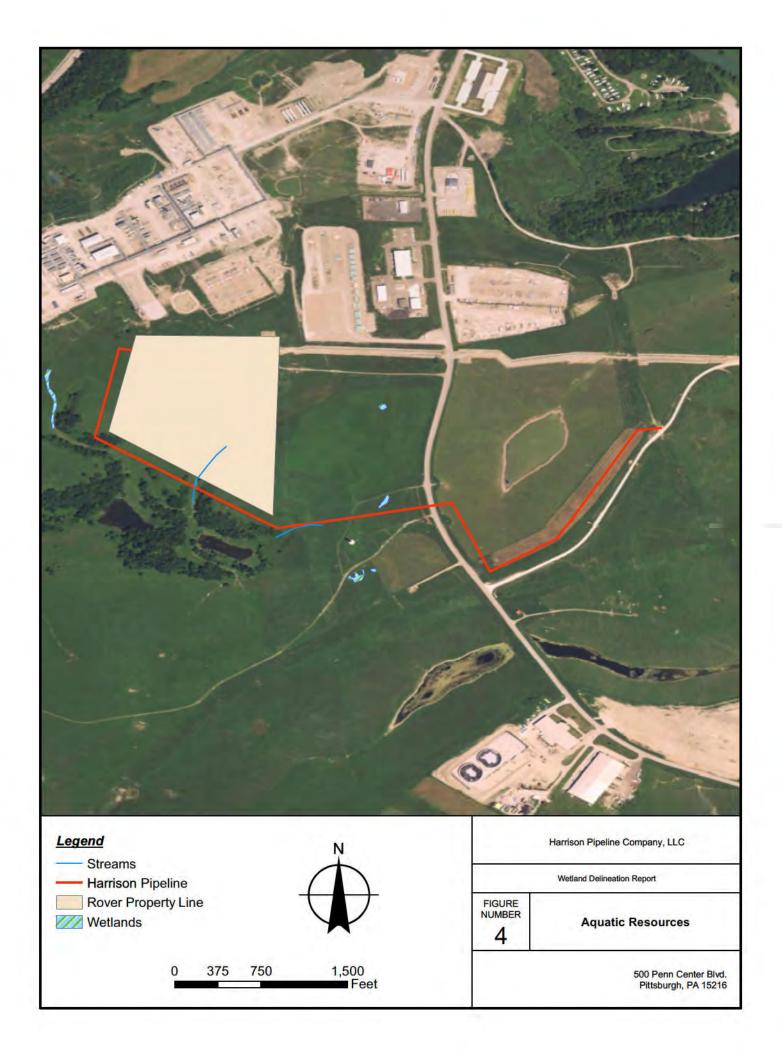
Kate Parsons, ODNR-DOW











This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

8/23/2021 4:45:30 PM

in

Case No(s). 21-0867-GA-BNR

Summary: Application Part III of Construction Notice Application electronically filed by Mr. Michael J. Settineri on behalf of Harrison Power LLC