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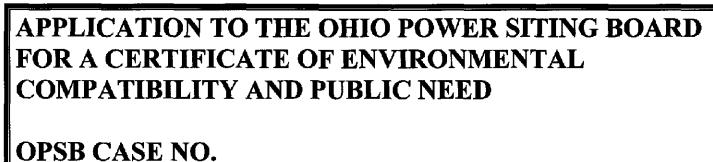
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07-0171-EL-BTX

# Geauga County 138 kV Transmission Line Supply Project September 2007

Volume II (Wetland Delineation)

Prepared by: URS Corporation

URS

Prepared for: American Transmission Systems, Incorporated and Cleveland Electric Illuminating Company

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# APPENDIX 07-1

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Wetland Delineation, Stream Assessment, and Threatened and Endangered Species Habitat Survey, Preferred Route Geauga County 138 kV Electric Transmission Line, Geauga County, Ohio

# CONTENTS

				TAU				
EXEC	UTIVE	SUMMA	RY	iii				
1.0	INTR	ODUCTI	ON	7				
2.0	MET	HODS		1				
3.0	RESU	JLTS		2				
	3.1	U.S. A	RMY CORPS OF ENGINEERS WETLAND DELINEATION					
		3.1.1	Preliminary Soils Evaluation	3				
		3.1.2	National Wetland Inventory (NWI) Map Review					
		3.1.3	Delineated Wetlands	17				
		3.1.4						
		3.1.5						
	3.2	OEPA	ORAM V5.0 WETLAND EVALUATION					
	3.3	STRE.	AM EVALUATIONS	23				
	3.4	NON	JURISDICTIONAL ROADSIDE DITCHES	25				
	3.5	THRE	ATENED AND ENDANGERED SPECIES HABITAT SURVEY	25				
		3.5.1	Plants	26				
		3.5.2	Aquatic species	26				
		3.5.3	Amphibians	26				
		3.5.4	Reptiles	26				
		3.5.5	Birds	26				
		3.5.6	Mammals	26				
		3.5.7	Insects	27				
4.0	SUM	MARY		27				
5.0	REFE	PROCEDURE						

#### TABLES

#### (follows text)

#### Number

SECTION

1 MARINE SI ECHES IDENTIFIED OK EINEET TO OCCOK IN THE STODT AKLA	1	NIMAL SPECIES IDENTIFIED OR LIKELY TO OCCUR IN THE STUDY AREA
-------------------------------------------------------------------	---	---------------------------------------------------------------

- 2 MAJOR PLANT SPECIES OBSERVED OR EXPECTED TO OCCUR IN THE STUDY AREA
- 3 DETAILED WETLAND DESCRIPTIONS

#### PAGE

a.

#### CONTENTS (Continued)

#### FIGURES

#### (follow tables)

#### Number

- 1A-C ROUTE VICINITY MAP
- 2A-C NATIONAL WETLAND INVENTORY MAP
- 3A-C OHIO WETLAND INVENTORY MAP
- 4A-Y WETLAND DELINEATION AND STREAM ASSESSMENT MAP
- 5A-C SOILS MAP

#### APPENDICES (follow figures)

#### Appendix

- A U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION FORMS
- B OHIO EPA OHIO RAPID ASSESSMENT METHOD (ORAM) FOR WETLANDS V5.0 FORMS AND GRAPH
- C OHIO EPA QUALITATIVE HABITAT EVALUATION INDEX (QHEI) FORMS AND TABLE
- D SELECTED PHOTOGRAPHS
- E AGENCY CORRESPONDENCE

#### **EXECUTIVE SUMMARY**

American Transmission Systems, Inc. (ATSI) and The Cleveland Electric Illuminating Company (CEI), subsidiaries of FirstEnergy Corp, are proposing construction of a 138 kV electric transmission line from a proposed distribution substation in Huntsburg Township along US Route 322 in Geauga County, Ohio to an existing 138 kV transmission line located along the border of Geauga and Lake Counties in northeast Ohio. This jurisdictional wetland delineation, stream assessment, and threatened and endangered species survey was conducted along the 14.7-mile long, 200-foot wide corridor for the Preferred Route, and an approximately one-acre proposed distribution substation located in Geauga County, Ohio. Delineation and assessment work was conducted in May, June, July, and August 2007. A separate report has been prepared for the proposed alternate route corridor.

One hundred two (102) wetlands, totaling 55.6 acres, of 11 different wetland habitat types were identified along the corridor, including 20 palustrine emergent wetlands, four palustrine emergent/forested wetlands, 15 palustrine emergent/scrub-shrub wetlands, two palustrine emergent/scrub-shrub/forested wetlands, 15 palustrine forested wetlands, three palustrine forested/emergent wetlands, ten palustrine forested/scrub-shrub wetlands, three pond natural vernal-woodland wetlands, 13 palustrine scrub-shrub wetlands, 12 palustrine scrub-shrub/forested wetlands, and five palustrine scrub-shrub/forested wetlands (Cowardin et al. 1979, Heber 2007). These wetlands are summarized in Table ES-1.

Identified wetlands were evaluated utilizing the Ohio Rapid Assessment Method (ORAM) v5.0 for categorizing wetlands. Wetland ORAM scores indicated the following: 23 Category I wetlands and 79 Category II palustrine wetlands. All of the wetlands are considered non-isolated and jurisdictional. No Category III wetlands were identified during the field investigations.

Sixty streams were identified, eight with a drainage basin area greater than one square mile, and 52 streams with a drainage basin area less than one square mile. The streams with a drainage basin greater than one square mile were scored using qualitative habitat evaluations (QHEI). Using the QHEI method, the survey rated one "fair" warmwater habitat stream and "seven" good warmwater habitat streams. There were seven ephemeral streams, four intermittent streams, and 41 perennial streams identified with a drainage basin less than one square mile. These streams are summarized in Tables ES-2 and ES-3.

The USFWS literature review indicated that the proposed project is located within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the once threatened Bald eagle (*Haliaeetus leucocephalus*). No species of concern were identified during field investigations. However, potential habitat for the Indiana bat was identified during the field investigation.

#### TABLE ES-1

# EXECUTIVE SUMMARY TABLE OF WETLANDS LOCATED IN THE GEAUGA COUNTY PREFERRED ROUTE ELECTRIC TRANSMISSION LINE CORRIDOR

	LET EKKED KO			ANE COKKIDOR		
• Wetland Identifier	Cowardin Wetland Type	Wetland Acreage in	ORAM Score	ORAM Category	Linear	Wetland Acreage in -68ff Construction
		2001 Courider			Cressed	Corridor
Pr-w001	PSS	<0.1	16	I	0	0
Pr-w002	PEM/PSS	0.1	31	п	39	0.1
Pr-w003	PEM/PSS	0.3	31	II	54	0.1
Pr-w004	PEM/PSS/PFO	1.0	54	II	251	0.3
Pr-w005	PEM	<b>&lt;0</b> .1	28	Ι	0	0
Pr-w006	PEM	<0.1	10	I	0	<0.1
Pr-w007	PEM/PSS	0.4	52	II	116	0.2
Pr-w008	PFO	<0.1	27	I	0	0
Pr-w009	PSS	<0.1	27	I	0	<0.1
Pr-w010	PSS	<0.1	22	I	0	<0.1
Pr-w011	PEM/PSS	0.3	51	II	88	0.1
Pr-w012	PEM/PSS	0.4	51	II	98	0.1
Pr-w013	PSS/PEM	0.1	38.5	11	0	0
Pr-w014	PEM	<0.1	31	11	0	<0.1
Pr-w015	PEM/PFO	<0.1	45	II	0	<0.1
Pr-w016	PSS/PEM	<0.1	44.5	II	8	<0.1
Pr-w017	PSS/PEM	<0.1	44.5	II	0	0
Pr-w018	PEM/PSS	0.1	36.5	II	0	<0.1
Pr-w019	PSS/PEM	0.2	33.5	II	101	0.1
Pr-w020	PSS/PFO	0.1	39.5	II	0	<0.1
Pr-w021	PSS/PFO	0.2	39.5	Π	36	0.1
Pr-w022	PSS/PFO	0.4	39.5	II	112	0.2
Pr-w023	PSS	0.3	34.5	П	94	0.1
Pr-w024	PFO/PSS	0.4	45.5	11	101	0.1
Pr-w025	PFO/PSS	1.3	45.5	II	108	0.2
Pr-w026	PFO	0.3	52	II	0	<0.1
Pr-w027	PEM	0.1	20	Ι	0	0
Pr-w028	PFO	0.9	41	I	170	0.2
Pr-w029	PFO	1.2	39.5	П	313	0.4
Pr-w030	PEM/PSS	2.6	39.5	II	564	0.8
Pr-w031	PSS/PEM	0.4	38	11	84	0.1
Pr-w032	PEM/PFO	1.1	44	II	332	0.5
Pr-w033	PD1m	0.1	47	П	4	<0.1
Pr-w034	PEM/PSS	1.5	54	П	422	0.6

September 2007 ATSI & CEI 14946398

# EXECUTIVE SUMMARY TABLE OF WETLANDS LOCATED IN THE GEAUGA COUNTY

# Wetland Cowardin Wetland ORAM Linear Wetland Acreage in Identifier Wetland Type Acreage in ORAM Category Feet 60ft Construction Construction 200ft Corridor Score Category Construction

	Cowardin	Acreage in	ORAM	ORAM	Feet	60ft Construction
Telentifier	Wetland Type	200ft Corridor	Score	Category	Crossed	Corridor
Pr-w035	PSS/PFO	2.1	55	II	583	0.8
Pr-w036	PFO/PSS	1.7	55	II	411	0.6
Pr-w037	PFO/PSS	1.1	55	II	323	0.4
Pr-w038	PFO/PSS	0.1	55	II	20	<0.1
Pr-w039	PFO/PSS	1.3	55	II	399	0.5
Pr-w040	PSS/PEM	1.2	28	1	0	0
Pr-w041	PSS	0.3	28	I	107	0.1
Pr-w042	PSS	0.4	28	I	173	0,2
Pr-w043	PEM	0.7	20	I	194	0.3
Pr-w044	PSS	0.8	24	I	292	0.4
Pr-w045	PEM	0.7	33	II	231	0.3
Pr-w046	PFO/PEM	<0.1	57	II	0	0
Pr-w047	PFO	0.4	57.5	II	85	0.1
Pr-w048	PD1m	1.3	57.5	IĬ	337	0.5
Pr-w049	PEM/PSS/PFO	2.6	57.5	II	854	1.2
Pr-w050	PFO/PSS	1.2	57.5	II	362	0.5
Pr-w051	PEM	<0.1	53.5	II	0	<0.1
Pr-w052	PFO/PSS	0.3	53.5	II	68	0.1
Pr-w053	PFO/PSS	1.1	53.5	Π	382	0.4
Pr-w054	PFO	0.8	53.5	11	146	0.2
Pr-w055	PFO	<0.1	53.5	II	0	0
Pr-w056	PFO	0.2	53.5	Π	132	0.2
<u>Pr-w057</u>	PFO	<0.1	53.5	II_	0	<0.1
Pr-w058	PFO	4.1	53.5	П	1045	1.4
Pr-w059	PFO/PSS	1.8	42	П	519	0.7
Pr-w060	PSS/PEM	0.8	45.5	П	222	0.3
Pr-w061	PEM	0.1	16	I	0	<0.1
Pr-w062	PSS	0.4	32	Ш	115	0.2
Pr-w063	PSS/PFO	0.9	51	П	263	0.4
Pr-w064	PEM/PSS	0.2	43.5	<u>I</u> I	0	0
Pr-w065	PSS/PEM	0.7	59	П	176	0.2
Pr-w066	PSS/PEM	1.1	35	П	264	0.4
<b>Pr-w067</b>	PSS/PEM	1.1	57	П	198	0.3
Pr-w068	PSS	0.6	55.5	П	59	0.1
Pr-w069	PSS	0.1	45	П	0	0
Pr-w070	PFO	0.8	59	Ш	72	0.1
Pr-w071	PSS	1.5	46	Ш	456	0.6
Pr-w072	PEM/PSS	0.2	43	II	0	0
Pr-w073	PSS	<0.1	32	Π	0	0
<b>Pr-w074</b>	PSS	0.2	32	<u> </u>	27	0.1
Pr-w075	PEM/PSS	0.1	24	I	28	<0.1
Pr-w076	PEM/PSS	0.1	24	Ι	4	<0.1



# **EXECUTIVE SUMMARY TABLE OF WETLANDS LOCATED IN THE GEAUGA COUNTY**

<u>P1</u>	REFERRED ROL	<u>JTE ELECTRI</u>	<u>C TRANS</u>	MISSION 1	JNE COI	KRIDOR
Wetland	Cowardin Wetland Type	Welland Acrosge m 2007 Corridor	DRAM Score	OR4M Category	Linear Feet Crossed	Welland Acresge in Offe Construction Cornidor
Pr-w077	PSS/PEM	0.2	39.5	) п	53	0.1
Pr-w078	PEM/PSS	0.1	34	<u> </u>	0	0
Pr-w079	PEM/PFO	<0.1	52.5	II	0	<0.1
Pr-w080	PSS/PEM	0.2	34	II	0	0
Pr-w081	PEM	<0.1	41	II	0	<0.1
Рг-w082	PFO/PEM	0.2	36	II	0	<0.1
Pr-w083	PEM/PSS	<0.1	27	I	0	0
Pr-w084	PEM	0.8	24	I	216	0.3
Pr-w085	PEM	1.1	27	I	272	0.4
Pr-w086	PFO	0,1	47	П	94	0.1
Pr-w087	PFO	0.3	49	П	0	<0.1
Pr-w088	PEM	<0.1	25	I	0	<0.1
Pr-w089	PEM	<0.1	46	II	5	<0.1
Pr-w090	PEM	<0.1	45	II	0	0
Pr-w091	PEM	<0.1	34	II	0	0
Pr-w092	PFO	<0.1	41	II	0	0
Pr-w093	PD1m	<0.1	57	II	0	0
Pr-w094	PFO/PEM	1.9	55	II	449	0.6
Pr-w095	PEM	1.2	30	п	291	0.4
Pr-w096	PEM/PSS	0.1	22	Ι	0	0
Pr-w097	PEM	0.6	41.5	II	215	0.3
Pr-w098	PEM	0.1	23	I	0	0
Pr-w099	PEM/PFO	0.2	36	II	126	0.1
Pr-w100	PEM	0.1	28	I	12	<0.1
Pr-w101	PFO	1.2	29	I	338	0.4
Pr-w102	PEM	<0.1	32	1	32	<0.1
T	dals:	558			13,744	- 18.7

#### PREFERRED ROUTE ELECTRIC TRANSMISSION LINE CORRIDOR

# EXECUTIVE SUMMARY TABLE OF STREAMS LOCATED IN THE GEAUGA COUNTY

#### PREFERRED ROUTE ELECTRIC TRANSMISSION LINE CORRIDOR

		)) <u>200</u> 1 (144,287)			
Stream Identifier	Score	Flow Regime	Bank Full Width (feet)	Narrative Description	Stread Length (feet) within 2000 Cocritor
Pr-s030	59	Perennial	13	Good Warmwater Habitat	229
Pr-s034	58	Perennial	10	Good Warmwater Habitat	290
Pr-s044	55	Perennial	13	Good Warmwater Habitat	308
Pr-s049	43	Perennial	13	Fair Warmwater Habitat	243
Pr-s051	61	Perennial	13	Good Warmwater Habitat	235
Pr-s053	61	Perennial	13	Good Warmwater Habitat	313
Pr-s054	64	Perennial	13	Good Warmwater Habitat	342
Pr-s057	64.5	Perennial	23	Good Warmwater Habitat	<b>44</b> 4
Sabtotal: 8			112		2,405

# **OHEI STREAMS**



# EXECUTIVE SUMMARY TABLE OF STREAMS LOCATED IN THE GEAUGA COUNTY PREFERRED ROUTE ELECTRIC TRANSMISSION LINE CORRIDOR STREAMS WITH A

DRAINAGE BASIN LESS THAN ONE SQUARE MILE								
Stream D	Flow Kegime	Bank Full Welth (feet)	Maximum Pool Depth (centimeters)	Stream Length (Sect)				
<b>Pr-s001</b>	Perennial	4	10	259				
Pr-s002	Perennial	2	5	176				
Pr-s003	Perennial	4	7	218				
Pr-s004	Perennial	4	7	305				
Pr-s005	Perennial	4	5	230				
Pr-s005	Perennial	4	7	290				
Pr-s007	Perennial	3	4	250				
Pr-s008	Intermittent	2	 	240				
Pr-s009	Perennial		6	245				
		4		92				
Pr-s009b	Perennial	5	6					
Pr-s010	Perennial	2	4	244				
Pr-s011	Perennial	4	8	278				
Pr-s012	Perennial	4	4	210				
Pr-s013	Perennial	4	4	163				
Pr-s014	Perennial	7	15	271				
Pr-s015	Perennial	10	20	264				
Pr-s016	Perennial	2	12	237				
Pr-s017	Perennial	10	20	266				
Pr-s018	Perennial	7	15	214				
Pr-s019	Perennial	10	7	220				
Pr-s020	Perennial	8	4	200				
Pr-s021	Perennial	11	5	226				
Pr-s022	Perennial	7	4	207				
Pr-s023	Perennial	8	6	202				
Pr-s024	Perennial	5	4	200				
Pr-s025	Intermittent	5	7	128				
Pr-s026	Ephemeral	3	0	227				
Pr-s027	Perennial	8	11	330				
Pr-s028	Perennial	10	18	345				
Pr-s029	Perennial	5	8	1015				
PT-s031	Ephemeral	2	0	280				
Pr-s032	Perennial	7	10	249				
Pr-s033	Ephemeral	1	0	205				
Pr-s035	Ephemeral	2	0	202				
Pr-s036	Perennial	10	6	229				
Pr-s037	Ephemeral	2	0	406				
Pr-s038	Perennial	2	3	228				
Pr-s038b	Perennial	2	3	119				
Pr-s039	Intermittent	5	12	290				
Pr-s040	Ephemeral	2	00	427				
Pr-s041	Perennial	11	12	971				

#### DRAINAGE BASIN LESS THAN ONE SOUARE MILE

September 2007 ATSI & CEI 14946398

# EXECUTIVE SUMMARY TABLE OF STREAMS LOCATED IN THE GEAUGA COUNTY PREFERRED ROUTE ELECTRIC TRANSMISSION LINE CORRIDOR STREAMS WITH A DRAINAGE BASIN LESS THAN ONE SQUARE MILE

Streen D	Plow Regime	Bank Full Width (feet)	Maximum Paol Depth (centimeters)	Strenm Length fleets within 2001 Corridor
Pr-s042	Perennial	4	7	203
Pr-s043	Perennial	7	10	201
Pr-s045	Perennial	4	4	279
Pr-s046	Perennial	8	9	550
Pr-s047	Perennial	3	10	629
Pr-s048	Perennial	7	10	230
Pr-s050	Ephemeral	3	0	47
Pr-s052	Perennial	3	25	107
Рт-s055	Perennial	4	5	626
Pr-s056	Perennial	8	15	370
Pr-s058	Intermittent	3	0	200
Stational: 52		258 P. 10	375	14,906
Liotal of all Streams: 60		570 ST		idaa ***** ***** ***** *****



# Wetland Delineation, Stream Assessment, and Threatened and Endangered Species Habitat Survey, Preferred Route Geauga County 138 kV Electric Transmission Line, Geauga County, Ohio

#### **1.0 INTRODUCTION**

American Transmission Systems, Inc. (ATSI) and the Cleveland Electric Illuminating Company (CEI) are proposing construction of a 138 kV electric transmission line. For the proposed Preferred Route, the transmission line would start at a proposed distribution substation which would be located east of Huntsburg along Mayfield Road (U.S. 322), to the existing Mayfield-Ashtabula 138 kV transmission line, approximately 14.71 miles to the north, in southern Lake County, Ohio. A project vicinity map is provided as Figures 1A through 1C. ATSI and CEI retained URS to conduct wetland delineation, stream assessment, and a threatened and endangered species habitat survey along the proposed transmission line corridor. This field work was conducted between May 7, 2007 and August 2, 2007. Data from this report will be used to support an Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need, address U.S. Army Corps of Engineers (ACOE) 404 permitting, and Ohio Environmental Protection Agency (Ohio EPA) 401 Water Quality Certification permitting. A separate report has been prepared for the proposed Alternate Route of the transmission line.

#### 2.0 METHODS

The project corridor was investigated for the presence of wetlands using the procedures outlined in the 1987 U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual (Environmental Laboratory, 1987. URS biologists walked the entire 200-foot wide study corridor of the proposed transmission line. Completed ACOE wetland delineation forms are provided in Appendix A. In addition, URS prepared a functional wetland analysis for each delineated wetland in the corridor using the regionally specific Ohio Rapid Assessment Method (ORAM) version 5.0 (ORAM v5.0 Manual, 2001) qualitative wetland evaluation forms. Completed ORAM forms are provided in Appendix B.

September 2007 ATSI & CEI 14946398

1

The perennial, intermittent, and ephemeral stream channels within the study corridor were assessed based upon the Ohio EPA's Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI), 2006. The QHEI method was used for streams with a drainage basin greater than one square mile and provides a method for assessing streams, in a manner similar to the ORAM forms for wetlands, under the same Section 401 regulatory program. Completed QHEI forms are included in Appendix C. For streams with a drainage basin less than one square mile, flow regime, bankfull width, class, stream length within the 200 foot corridor and 60 foot construction right of way was collected along with a review of aquatic life use designations found in the Administrative Code.

The project corridor was investigated for the presence of threatened and endangered species habitat by qualified URS biologists with appropriate knowledge of habitat requirements for species of concern likely to be found within the project corridor. The survey was conducted primarily for identification of species potentially present within the project corridor listed as special concern by the United States Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR).

Details of each specific methodology are provided in the following wetland delineation, stream assessment, and endangered species habitat survey conducted by URS in May through August, 2007.

#### 3.0 RESULTS

# 3.1 U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION PROCEDURE

The extent and locations of wetlands in the study area generally correlated with predictions based upon the preliminary soils evaluation, a review of USGS topographic contours for the site vicinity, aerial photography, OWI map review, and NWI map review. The field wetland delineation, conducted after the preliminary literature review, identified 102 wetlands within the project corridor.

#### 3.1.1 Preliminary Soils Evaluation

According to the Soil Survey of Geauga County, Ohio, (U.S.D.A Soil Conservation Service, 1982), 32 soil phases from 17 soil series are mapped within the limits of the study area and include Chili-loam (CnB, CnC), Chili-Oshtemo complex (CyD), Darien silt loam (DrA, DrB), Ellsworth silt loam (EhB, EhB2, EhC, EhC2, EhD, EhE, EmC, EmD), Holly silt loam (Ho), Haskins loam (HsA, HsB), Jimtown silt loam (JtA), Lordstown loam (LrB), Lordstown-Rock outcrop complex (LxD), Mahoning silt loam (MgA, MgB, MsA, MsB), Mitiwanga silt loam (MtA), Orrville silt loam (Or), Pits, quarry (Pq), Platea silt loam (PsA, PsB), Rawson silt loam (RmB), Sebring silt loam (Sb), and Sheffield silt loam (Sf). Three of these soil phases are listed as hydric: Ho, Sb, and Sf. Nine soil phases are known to contain mapped inclusions of hydric soil in depressions. These are CyD, DrA, JtA, MgA, MgB, MsA, MsB, MtA, and Or.

According to the *Soil Survey of Lake County, Ohio,* (Natural Resource Conservation Service, 1979) there is one soil series (Darien silt Ioam) with two soil phases (DaA, DaB) mapped within the limits of the study area in Lake County, Ohio. The Lake County Soil Survey lists DaA as mapped with known inclusions of hydric soils in depressions. Maps with soil phases within 1,000 feet of the project centerline can be found on Figure 5A through 5C. Details of soil types are discussed as follows:

# Chili loam, 6 to 12 percent slopes (CnC)

This is a deep, sloping, well-drained soil typically found on stream terraces, outwash plains, and kames (short, steep hills formed by meltwater of a retreating glacier). The surface layer is a dark brown friable loam about 7 inches thick. The subsoil is usually about 35 inches thick with an upper portion that is brown and reddish brown friable loam and a lower portion that is dark brown firm gravelly sandy clay loam and gravelly sandy loam. The permeability is moderately rapid, runoff is medium, and water capacity varies from moderate to low. This soil is suited to cultivated crops, hay, and pasture, though erosion and droughtiness are hazards for these applications. Woodland, buildings, local roads and streets, septic tank absorption field, and recreation uses are all suited to this soil.

#### Chili-Oshtemo complex, 6 to 18 percent slopes (CyD)

This complex consists of deep, well-drained, rolling and hilly Chili and Oshtemo soils on kames. Soil composition of this complex is about 55 percent Chili gravelly loam, 30 percent Oshtemo sandy loam, and 15 percent included soils. In general, the surface layer of the Chili soil is a dark grayish brown, friable gravelly loam about 6 inches thick. The subsoil is about 42 inches thick with the upper part consisting of dark yellowish brown, friable loam and clay loam and a lower portion consisting of dark brown, friable gravelly loam, gravelly clay loam, and gravelly sandy loam. The surface layer of the Oshtemo soil is dark grayish brown, friable sandy loam about 6 inches thick. The subsoil is about 44 inches thick with an upper portion consisting of dark brown, friable sandy loam and a lower portion consisting of dark brown, friable sandy loam and a lower portion consisting of dark brown, friable sandy loam about 6 inches thick. The subsoil is about 44 inches thick with an upper portion consisting of dark brown, friable sandy loam and a lower portion consisting of brown, loose loamy sand. The included soils in this complex are generally small areas of more droughty soil that are 50 to 70 percent gravel in the subsoil. They are found near the crest of hills.

Unmapped inclusions of poorly drained hydric Sebring and Candice soils are found in depressions that receive runoff and sediment. In the Chili soil, permeability is moderately rapid. In the Oshtemo soil, it is moderately rapid in the upper part of the subsoil. Runoff is rapid in both soils, and both soils have a low to moderate available water capacity. These soils are used for pasture, woodland, and cultivated crops, though they are poorly suited to cultivated crops. Erosion can be severe in steep, cultivated areas. These soils are better suited to use as woodland and as habitat for woodland wildlife. Use of these soils as building sites is a moderately well-suited use if measures are taken to protect against erosion during construction.

#### Darien silt loam, 0 to 1 percent slopes (DaA)

This is a deep, nearly level, somewhat poorly drained soil on broad flats. The surface layer is typically dark grayish brown, friable silt loam about 11 inches thick. The subsoil is about 26 inches thick. The upper part of the subsoil is grayish brown, mottled, firm silt loam; and the lower part is light olive brown, mottle, firm silty clay loam. In undrained areas, this soil has a perched seasonal high water table near the surface during winter, spring, and other excessively wet periods. Some areas are ponded during these periods. Permeability is slow, and runoff is very slow. Organic matter content is moderately low.

This soil is used mainly for woodland, hay, and pasture. This soil contains unmapped inclusion of hydric soils in depressions.

# Darien silt loam, 1 to 4 percent slopes (DaB)

This is a deep, nearly level and gently sloping, somewhat poorly drained soil on slightly convex side slopes. The surface layer is typically dark grayish brown, friable silt loam about 7 inches thick. The subsoil is about 33 inches thick. The upper part of the subsoil is yellowish brown, mottled, firm silt loam; the middle part is brown and dark yellowish brown, mottled, firm silty clay loam; and the lower part is brown, mottled, firm silty clay loam. In undrained areas, this soil has a perched seasonal high water table near the surface during winter, spring, and other excessively we periods. Permeability is slow and runoff is slow or medium. Available water capacity is moderate, and organic matter content is moderately low. This soil is used mainly for woodland, hay, and pasture.

# Darien silt loam, bedrock substratum, 0 to 2 percent slopes (DrA)

This is a deep, nearly level, somewhat poorly drained soil found in broad areas of uplands. The surface layer is typically dark grayish brown, friable silt loam about 8 inches thick. The subsurface layer is light yellowish brown, friable silt loam about 4 inches thick. The subsoil is about 28 inches thick and consists of an upper portion of grayish brown, mottled, friable loam and middle and lower portions consisting of dark yellowish brown, mottled, firm clay loam. The water table is perched between 6 and 18 inches during winter, spring, and other extended wet periods. Permeability and runoff are slow and the available water capacity is moderate. Seasonal wetness limits the use of this soil for cultivated crops, use as septic tank absorption fields, and as sites for buildings. This soil is moderately well suited to use as woodland. This soil contains unmapped inclusion of hydric soils in depressions.

# Darien silt loam, bedrock substratum, 2 to 6 percent slopes (DrB)

This is a deep, gently sloping, somewhat poorly drained soil on broad convex slopes on uplands. The surface layer is typically dark grayish brown, friable silt loam about 7 inches thick. The subsoil is about 33 inches thick. The upper part is light olive brown, mottled, firm loam and silt loam; and the middle and lower parts are gray, mottled, firm

clay loam. A water table is perched between depths of 6 and 18 inches in winter and spring and during other periods of extending wetness. Permeability is slow, and runoff is slow or medium. This soil is used as cropland, woodland, and pasture.

#### Ellsworth silt loam, 2 to 6 percent slopes (EhB)

This is a deep, gently sloping, moderately well drained soil found on knolls and side slopes at the heads of drainages in uplands. The surface layer is generally grayish brown, friable silt loam about 9 inches thick. The subsoil is about 29 inches thick with an upper portion that is brown, mottled, firm silty clay loam, a middle portion that is brown, mottled, firm clay, and a lower portion that is dark brown, mottled, firm silty clay loam. A perched water table is present between depths of 24 and 36 inches in winter, spring, and during extended wet periods. Permeability is slow to very slow, runoff is medium, and the available water capacity is moderate. This soil is suited to cultivated crops, hay, pasture, and orchards.

# Ellsworth silt loam, 2 to 6 percent slopes (EhB2)

This is a deep, gently sloping, moderately drained soil on knolls and side slopes parallel to drainages on uplands. The surface is susceptible to erosion. The surface layer is typically a brown, friable silt loam about 6 inches thick. The subsoil is about 25 inches thick, the upper part is dark yellowish brown, firm silty clay loam; and the lower part is dark brown and dark yellowish brown, mottled, firm clay and silty clay loam. The water table is perched between depths of 24 and 36 inches in winter, spring, and during extended wet periods. The content of organic material is moderately low. Permeability is slow to very slow. Runoff and water capacity is moderate. This soil is well suited to use as woodland.

# Ellsworth silt loam, 2 to 6 percent slopes (EhC)

This is a deep, sloping, moderately well drained soil found on ridgetops, uneven shoulder slopes, and along well defined waterways. The surface layer is dark grayish brown, friable silt loam about 7 inches thick. The subsoil is about 26 inches thick with an upper part consisting of dark yellowish brown and dark brown, firm silty clay loam and a lower portion that is dark brown and dark yellowish brown, mottled, firm clay. A perched water

table occurs between 24 and 36 inches in depth during winter and spring. Permeability is slow to very slow, runoff is rapid, and the available water capacity is moderate. This soil is suited to hay and pasture, moderately well suited to use as woodland and as a site for buildings, and poorly suited for use as septic tank absorption fields.

# Ellsworth silt loam, 6 to 12 percent slopes (EhC2)

This is a deep, sloping, moderately well drained soil on ridgetops and uneven shoulder slopes and along well defined waterways in uplands. This surface is susceptible to erosion, and in uneroded areas the surface layer is very dark grayish brown. The surface layer is typically a brown, friable silt loam about 5 inches thick. The subsoil is 26 inches thick, the upper part is dark yellowish brown and dark brown, firm silty clay loam; and the lower part is dark brown and dark yellowish brown, mottled, firm clay. The water table is perched between depths of 24 and 36 inches in winter and spring. Permeability is slow or very slow, and runoff is rapid. This soil is suited to hay, pasture, and woodland. Erosion is a serious hazard where the slopes are long.

# Ellsworth silt loam, 12 to 18 percent slopes (EhD)

This is a deep, moderately steep, moderately well drained soil on convex hillsides and side slopes. The surface layer is dark grayish brown, friable silt loam about 7 inches thick. The subsoil is about 26 inches thick, the upper part is dark yellowish brown and dark brown, firm silty clay loam; and the lower part is dark brown and dark yellowish brown, mottled, firm clay. The water table is perched between depths of 24 and 36 inches in winter and spring. Permeability is slow or very slow, and runoff is rapid. Soil generally found in woodlands. Slope and the hazard of erosion severely limit the use of this soil for cultivated crops, housing developments, and logging.

# Ellsworth silt loam, 18 to 25 percent slopes (EhE)

This is a deep, steep, moderately well drained soil on side slopes. The surface layer is typically dark grayish brown, friable silt loam about 5 inches thick. The subsoil is about 24 inches thick, the upper part is dark yellowish brown and dark brown, firm silty clay loam; and the lower part is dark yellowish brown, mottled, firm clay. The water table is perched between depths of 24 and 36 inches during wet periods. Permeability is slow or

very slow, and runoff is very rapid. The soil is mostly used for woodland; however this soil is too steep for cultivated crops. Erosion is a serious hazard when vegetative cover is not present.

#### Ellsworth silt loam, 12 to 18 percent slopes (EmD)

This is a deep, moderately steep, moderately well drained soil on side slopes. The surface layer is very dark grayish brown, friable silt loam about 3 inches thick. The subsurface layer is brown, friable silt loam about 4 inches thick. The water table is perched between depths of 24 and 36 inches in winter and spring. Permeability is slow and runoff is very rapid. In most areas this soil is used as pasture or woodland. Slope and the hazard of erosion severely limit the use of this soil for cultivated crops.

# Ellsworth silt loam, shale substratum, 6 to 12 percent slopes (EmC)

This is a deep, sloping, moderately well drained soil on ridgetops and along well defined waterways. The surface layer is typically dark brown, friable silt loam about 8 inches thick. The subsoil is about 34 inches thick. The upper part is yellowish brown, firm silty clay loam; and the lower part is yellowish brown, mottled, firm silty clay. A water table is perched between depths of 24 and 36 inches in winter and spring. Permeability is slow, and runoff is rapid. In most areas this soil is used as cropland, but it is also suited for hay and pasture.

# Holly silt loam, frequently flooded (Ho)

This is a deep, nearly level, poorly drained soil on flood plains. It is frequently flooded for long periods in fall, winter, and spring. The surface layer is dark grayish brown, friable silt loam about 9 inches thick. The subsoil is about 12 inches thick. It is dark gray, firm silt loam and clay loam that has mottles below a depth of about 12 inches. The water table is near the soil surface in winter, spring, and during extended wet periods. Permeability is moderate or moderately slow, and runoff is very slow, with water ponded in some areas. In most areas the soil is in wetland vegetation and woodland. Flooding and wetness limit the use of this soil for cultivated crops, hay, and pasture. Holly silt loam is on the hydric soils list.



September 2007 ATSI & CEI 14946398

#### Haskins loam, 0 to 2 percent slopes (HsA)

This is a deep, nearly level, somewhat poorly drained soil found on uplands and outwash plains. The surface layer is typically dark brown, friable loam about 9 inches thick. The subsoil is about 37 inches thick with upper and middle portions consisting of yellowish brown and dark brown, mottled, firm loam, clay loam, sandy clay loam, and gravelly sandy clay loam and lower portions consisting of dark brown, mottled, firm clay loam. A perched water table occurs between 12 and 30 inches in depth in winter, spring, and extended wet periods. Permeability is moderate in the upper and middle parts of the subsoil and slow to very slow in the lower part of the subsoil. Runoff is slow and the available water capacity is moderate. Seasonal wetness and slow permeability limit this soil's use for farming and septic tank absorption fields. Drained areas are suited to corn, hay, and pasture and undrained areas can be used for hay and pasture. This soil is well suited for use as woodland.

#### Haskins loam, 2 to 6 percent slopes (HsB)

This is a deep, gently sloping, somewhat poorly drained soil on uplands and outwash plains. The surface layer is dark brown, friable loam about 7 inches thick. The subsurface is about 37 inches thick with upper and middle parts consisting of yellowish brown and dark brown, mottled, firm loam, clay loam, sandy clay loam, and gravelly sandy clay loam and lower portions consisting of dark brown, mottled, firm clay loam. A perched water table is present between depths of 12 and 30 inches in winter, spring, and extended wet periods. Permeability is moderate in the upper and middle portions of the subsoil and slow or very slow in the lower part of the subsoil. Runoff is slow and the available water capacity is moderate. In drained areas, this soil is suited to cultivated crops, small grains, and hay, though erosion is a hazard on long cultivated slopes. In undrained areas, this soil is well suited to use as woodland. This soil is poorly suited to septic tank absorption fields and moderately well suited to houses without basements.

#### Jimtown silt loam, 0 to 3 percent slopes (JtA)

This is a deep, nearly level, somewhat poorly drained soil on stream terraces and outwash plains. The surface layer is dark grayish brown, friable silt loam about 9 inches thick. The subsoil is about 31 inches thick with an upper portion consisting of yellowish brown,

mottled, friable, and firm loam and sandy clay loam. The lower portion consists of yellowish brown, mottled, friable fine sandy loam and firm gravelly loam. The water table is located between depths of 12 and 30 inches in winter, spring, and extended wet periods. Permeability is moderate, runoff is slow, and the available water capacity is moderate. In drained areas, this soil is suited to corn, hay, and pasture. Homes without basements may be constructed in drained areas. In undrained areas this soil is suited to use as woodland and as habitat for openland and woodland wildlife. This soil contains unmapped inclusion of hydric soils in depressions.

#### Lordstown-Rock outcrop complex, 12 to 18 percent slopes (LxD)

This complex consists of moderately deep, well drained; moderately steep Lordstown channery loam and areas of exposed bedrock on hillsides. The surface layer of the Lordstown soil is very dark grayish brown, friable channery loam about 4 inches thick. The subsoil is dark yellowish brown and yellowish brown, friable channery loam and channery loam about 24 inches thick. Sandstone bedrock is at a depth of about 28 inches. The available water capacity is low, and runoff is very rapid. This complex is used as woodland and pasture.

#### Lordstown loam, 2 to 6 percent slopes (LrB)

This is a moderately deep, gently sloping, well drained soil on side slopes and ridgetops. The surface layer is typically very dark grayish brown friable loam about 5 inches thick. The subsoil is dark yellowish brown and yellowish brown, friable channery loam and channery fine sandy loam about 30 inches thick. Permeability is moderate, and runoff is medium. In most areas this soil is used as pasture or woodland. It is also suited for corn, small grains, and hay.

# Mahoning silt loam, 0 to 2 percent slopes (MgA)

This is a deep, nearly level, somewhat poorly drained soil found on uplands. The surface layer is dark grayish brown, friable silt loam about 8 inches thick. The subsoil is dark yellowish brown and brown, mottled, firm silty clay loam and clay about 30 inches thick. A perched water table occurs between depths of 12 to 30 inches in winter, spring, and extended periods of wetness. Permeability is slow to very slow, runoff is slow, and

available water capacity is moderate. Wetness and slow permeability limit this soil's use for cultivated crops, septic tank absorption fields, houses with basements, and other buildings. If used as farmland, soil must be drained to increase planting times and crop choice. This soil is well suited to use as woodland. This soil contains unmapped inclusion of hydric soils in depressions.

#### Mahoning silt loam, 2 to 6 percent slopes (MgB)

This is a deep, gently sloping, somewhat poorly drained soil found in broad areas on uplands. The surface layer is dark grayish brown, friable silt loam about 8 inches thick. The subsoil is dark yellowish brown, yellowish brown and grayish brown, mottled, firm silty clay loam about 28 inches thick. A perched water table occurs between 12 and 30 inches in winter, spring, and extended wet periods. Permeability is slow to very slow, runoff is medium, and available water capacity is moderate. Because of this soil's wetness and slow permeability, its use for crops, homesites, and septic tank absorption fields are limited. Draining this soil increases its potential uses. This soil contains unmapped inclusion of hydric soils in depressions.

# Mahoning silt loam, shale substratum, 0 to 2 percent slopes (MsA)

This is a deep, nearly level, somewhat poorly drained soil found on flats on uplands. The surface layer is dark grayish brown, friable silt loam about 9 inches thick. The subsoil is about 42 inches thick with an upper portion consisting of yellowish brown, mottled, firm silty clay loam and a lower portion consisting of dark yellowish brown and brown, mottled, firm silty clay loam and silty clay. A perched water table is present between 12 to 30 inches in winter, spring, and extended wet periods. Permeability and runoff are slow and the available water capacity is moderate. Seasonal wetness and slow permeability limit the use of this soil for farming, septic tank absorption fields, homesites, and local road construction. This soil is suited to use as woodland. This soil contains unmapped inclusion of hydric soils in depressions.

# Mahoning silt loam, shale substratum, 2 to 6 percent slopes (MsB)

This is a deep, gently sloping, somewhat poorly drained soil found in depressional areas between drainages. The surface layer is grayish brown, friable silt loam about 9 inches

thick. The subsoil is about 39 inches thick with an upper portion consisting of yellowish brown, mottled, firm silty clay loam and a lower portion consisting of dark yellowish brown and brown, mottled, firm silty clay loam and silty clay. A perched water table occurs between 12 to 30 inches in winter, spring, and extended wet periods. Permeability is slow, runoff is medium, and the available water capacity is moderate. Seasonal wetness and slow permeability limit farming, septic tank absorption field use, and use for homesites. In addition, erosion is a hazard when this soil is cultivated. This soil is suited to use as woodland. This soil contains unmapped inclusion of hydric soils in depressions.

#### Mitiwanga silt loam, 0 to 3 percent slopes (MtA)

This is a moderately deep, nearly level, somewhat poorly drained soil found on bedrockcontrolled landforms on uplands. The surface layer is dark grayish brown, friable silt loarn about 9 inches thick. The subsoil is about 22 inches thick with an upper portion consisting of yellowish brown and grayish brown, mottled, firm silt loarn and silty clay loarn and a lower portion consisting of dark yellowish brown, mottled, firm clay loarn. A perched water table can be found between 12 and 30 inches in winter, spring, and extended periods of wetness. Permeability is moderate, runoff is slow, and the available water capacity is low. Seasonal wetness and the moderate depth to bedrock limit the use of this soil for farming, building sites, and septic tank absorption fields. This soil is suited to use as woodland.

#### Orrville silt loam, frequently flooded (Or)

This is a deep, nearly level, somewhat poorly drained soil on flood plains. It is frequently flooded for very brief to brief periods in fall, winter, and spring. Typically, the surface layer is dark grayish brown, friable silt loam about 6 inches thick. The subsoil is about 25 inches thick, and it is yellowish brown and grayish brown, friable silt loam and loam that has mottles in the upper part. The water table is between depths of 12 and 30 inches in winter, spring, and during other extended wet periods. Permeability is moderate, and runoff is slow. In most areas this soil is used as pasture or woodland. Flooding and seasonal wetness limit farming and house construction. Orrville silt loam is known to contain unmapped hydric compounds or depressions and drainage ways.

#### Pits, quarry (Pq)

This map unit consists of open excavations from which sandstone bedrock has been removed by strip mining. These quarries are commonly in areas where the layer of soil material is relatively thin over sandstone bedrock.

#### Platea silt loam, 0 to 2 percent slopes (PsA)

This is a deep, nearly level, somewhat poorly drained soil on broad flats on uplands. The surface layer is typically dark grayish brown, friable silt loam about 8 inches thick. The subsoil is about 37 inches thick. The upper part is yellowish brown, mottled, friable silt loam and firm silty clay loam; the middle part is a dark yellowish brown, very firm and brittle, silty clay loam fragipan that has mottles between depths of about 17 and 34 inches; and the lower part is dark yellowish brown, firm silt loam. A water table is perched between depths of 6 and 24 inches in winter and spring and during other extended wet periods. Permeability is moderately slow in the upper part of the subsoil and very slow in the fragipan. Runoff is slow. In most areas this soil is used as woodland or pasture. In a few areas it is used for cultivated crops.

#### Platea silt loam, 2 to 6 percent slopes (PsB)

This is a deep, gently sloping, somewhat poorly drained soil on a slightly convex low knolls and side slopes on uplands. The surface layer is typically dark grayish brown, friable silt loam about 7 inches thick. The subsoil is about 27 inches thick. The upper part is yellowish brown and light olive brown, mottled, firm silt loam and silty clay loam; and the lower part is a brown and dark yellowish brown, mottled, very firm and brittle silty clay loam fragipan. A water table is perched above the very slowly permeable fragipan in winter and spring and during extended wet periods. Runoff is medium. In most areas this soil is used for cultivated crops and hay. In drained areas the soil is suited for corn, hay and pasture.

#### Rawson silt loam, 2 to 6 percent slopes (RmB)

This is a deep gently sloping, moderately well drained soil on terraces and uplands. The surface layer is dark brown loarn about 7 inches thick. The subsoil is about 26 inches

thick with an upper portion consisting of brown, friable loam, a middle portion consisting of yellowish brown and dark yellowish brown, mottled, firm, gravelly sandy clay loam, and a lower portion consisting of dark yellowish brown, firm clay loam. A perched water table occurs between 30 to 48 inches in winter, spring, and other extended periods of wetness. Permeability is moderate in the upper and middle portion of the subsoil and slow to very slow in the lower portion of the soil. Runoff is medium and the available water capacity is moderate. Though this soil is primarily used as and suited to corn, small grains, hay, and pasture, erosion is a hazard. This soil is moderately well suited to grazing in the early spring, sites for buildings without basements, septic tank absorption fields, and recreation uses. This soil is well suited to trees, and can be found in native hardwoods.

#### Sebring silt loam (Sb)

This is a deep, nearly level, poorly drained soil in basins of former glacial lakes and on terraces. It receives runoff from adjacent higher lying soils and is subject to ponding. Typically, the surface layer is very dark grayish brown, friable silt loam about 3 inches thick. The subsurface layer is grayish brown, mottled, friable silt loam about 5 inches thick. A water table is perched near or above the soil surface in winter, spring, and during other extended wet periods. Permeability is moderately slow. In most undrained areas this soil is in woodland and brush. Seasonal wetness severely limits the use of this soil for cultivated crops. Sebring silt loam is on the hydric soils list.

# Sheffield silt loam (Sf)

This is a deep, nearly level, poorly drained soil in low-lying or depressional areas and at the heads of drainages on uplands. It receives runoff from adjacent higher lying soils and is subject to ponding. Typically, the surface layer is dark gray, friable silt loam about 8 inches thick. The subsoil is about 32 inches thick, the upper part is light brownish gray, mottled, firm silt loam and silty clay loam; and the lower part is grayish brown and yellowish brown, mottled, firm, dense silty clay loam fragipan. A seasonal high water table is near or above the surface in winter, spring, and during other extended wet periods. Permeability is very slow in the fragipan and moderately slow in the upper part of the subsoil above the fragipan and in the substratum. Runoff is very slow or ponded, and the available water capacity of this zone is low. This soil is mainly used for woodland and pasture. The major limitations for farming are the very slowly permeable fragipan and seasonal wetness. Sheffield silt loam is on the hydric soils list.

# 3.1.2 National Wetland Inventory (NWI) Map Review

NWI wetlands are areas of potential wetland that have been identified from USFWS aerial photograph interpretation which have typically not been confirmed by field investigation. Forested and heavy scrub/shrub wetlands are often not shown on NWI maps as foliage effectively hides the visual signature that indicates the presence of standing water and moist soils from an aerial view. As a result NWI maps may not show all the wetlands found in a particular area nor do they necessarily provide accurate wetland boundaries. NWI maps are useful for providing indications of potential wetland areas, which are often supported by soil mapping and hydrologic predictions, based upon topographical analysis using USGS topographic maps.

According to the NWI maps of the Thompson and East Claridon, Ohio quadrangles, 32 NWI wetlands are located within the 200-foot project transmission line corridor, as shown on Figure 2A through 2C. Eight of the NWI wetlands were identified as Palustrine, Forested, Broad-Leaved Deciduous, Saturated/ Semipermanent/ Seasonal Wetlands (PFO1Y). Six areas were identified as Palustrine, Forested/Scrub-Shrub, Broad-Leaved Deciduous, Saturated/ Semipermanent/ Seasonal Wetlands (PFO/SS1Y). Six areas were designated as Palustrine, Scrub-Shrub, Broad-Leaved Deciduous/Emergent Saturated/ Semipermanent/ Seasonal Wetlands (PSS1/EMY). Five areas were identified as Palustrine, Shrub-Scrub, Broad-Leaved Deciduous, Saturated/ Semipermanent/ Seasonal Wetlands (PSS1Y). Three areas were designated Palustrine, Open Water, Intermittently Exposed/ Permanent Wetlands (POWZ). Three areas were designated Palustrine, Emergent, Saturated/ Semipermanent/ Seasonal Wetlands (PEMY). One area was designated Palustrine, Open Water, Permanently Flooded Wetland (POWH) (U.S. Fish & Wildlife Service, 1977).

# 3.1.3 Ohio Wetland Inventory (OWI) Map Review

OWI wetlands, like NWI wetlands, are areas of potential wetland that have been identified from ODNR aerial photograph interpretation which have typically not been confirmed by field investigation. OWI maps are useful tools for providing indications of potential wetland areas, which are often supported by comparison to NWI maps, soil mapping and hydrologic predictions, based upon topographical analysis using USGS topographic maps.

According to OWI maps of the Thompson and East Claridon, Ohio quadrangles, 104 OWI wetlands are located within the 200-foot project transmission line corridor, as shown on Figure 3A through 3C. One of these OWI wetlands was identified as Palustrine, Open Water (excludes Lake Erie) (POW). Two areas were identified as Palustrine, Wet Meadow (PEM), nine areas were designated as Palustrine, Woods on Hydric Soil (PFO), 39 areas were identified as Palustrine, Shrub/scrub Wetland (PSS), and 44 areas were designated Palustrine, Shallow Marsh (PEM) (Ohio Department of Natural Resources).

The following describes the OWI Wetland classification of the OWI wetlands located within the project corridor. The naming system can be found in: *Classification of Wetlands and Deepwater Habitats of the United States*, 1979, by Cowardin, Lewis M. et al.

(P) Palustrine - The Palustrine System includes all non-tidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5%. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics:

- 1. Are less than 8 hectares (20 acres);
- 2. Do not have an active wave-formed or bedrock shoreline feature;
- 3. Have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin;
- 4. Have salinity, due to ocean-derived salts, of less than 0.5%.

The limitation of a Palustrine System is that they are bounded by upland or by any of the other systems.

*Class* - Class describes the general appearance of the habitat in terms of either the dominant life form of the vegetation or the physiography and composition of the substrate. Life forms (e.g. trees, shrubs, emergents) are used to define classes because they are easily recognizable, do not change distribution rapidly, and have traditionally been used to classify wetlands.

(EM) Emergent - Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

(SS) Scrub Shrub – Scrub Shrub wetlands include areas dominated by woody vegetation less than 6 m (20 ft) tall. The species include tree shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. All water regimes are included except subtidal.

(FO) Forested – Woody vegetation is 6m tall or taller. Normally possess an overstory of trees, an understory of young trees or shrubs, and herbaceous layer.

# 3.1.4 Delineated Wetlands

The field wetland delineation conducted for this project identified 102 wetlands, totaling 55.6 acres, within the Preferred Route 200 foot wide study corridor. The location and approximate extents of these wetlands are shown on Figures 4A through 4Y. Copies of the ACOE wetland delineation data sheets for these wetlands are provided in Appendix A. Selected color photographs are provided in Appendix D. A comprehensive list of wetland and upland plant species in the vicinity of the study site is shown in Table 2.

By definition, the hydrologic regime of a wetland ranges from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). As quantitative data were not available for any of the delineated wetlands, URS utilized the method described in the *1987 Manual* that consists of a pedestrian site reconnaissance including identifying the vegetation communities, soils identification, a geomorphologic assessment of hydrology, and notation of disturbance. To determine the wetland boundaries, site vegetation, soils and hydrology were closely examined. Summary information for each delineated wetland is presented in Table 3.

#### 3.1.5 Wetland Habitat Description

Wetland Habitat Descriptions: The wetlands identified within the project corridor are classified as one of the following types (per the classification system developed by Cowardin *et al.*, [1979]).

Each identified wetland habitat is discussed below. The wetland habitat description given below identifies the dominant observed species by common name and scientific name with Region 1 indicator status (Reed, 1988) following in parentheses. Also described is the observed hydrologic regime. Individual wetland and upland test plot data forms given in Appendix A provide support for the wetland/upland boundary determinations.

**Palustrine Emergent Habitat (PEM):** Wetlands identified as palustrine emergent are characterized by having grasslike plants, true grasses, rushes and broad-leaved plants (Cowardin *et al.*, 1979). These areas are generally dominated by reed canarygrass (*Phalaris arundinacea*; FACW+), sensitive fern (*Onoclea sensibilis*; FACW), common rush (*Juncus effusus*; FACW+), common reed (*Phragmites australis*, FACW), jewelweed (*Impatiens capensis*; FACW), southern arrowwood (*Viburnum dentatum*; FAC), woolgrass (*Scirpus cyperinus*; FACW+), and other herbaceous vegetation. The hydrologic regime of these wetlands range from irregularly inundated or saturated (>12.5 percent-12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent-25 percent of the growing season) (Environmental Laboratory, 1987). All of these PEM wetlands reveal at least one primary indicator.

**Palustrine Emergent/Forested (PEM/PFO):** Wetlands classified as palustrine emergent/forested are characterized by grasslike plants, true grasses, broad-leaved plants, rushes, and trees at least 20 feet in height (Cowardin *et al.*, 1979). These areas are generally dominated by wetland plants such as jewelweed (FACW), sensitive fern (FACW), southern arrowwood (FAC), red maple (*Acer rubrum*; FAC), American elm (*Ulmus americana*; FACW-), and other herbaceous plants and trees. The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PEM wetlands reveal at least one primary and one secondary indicator of hydrology.

September 2007 ATSI & CEI 14946398 **Palustrine Emergent/Scrub-Shrub (PEM/PSS):** Wetlands classified as palustrine emergent/scrub-shrub are characterized by grasslike plants, true grasses, broad-leaved plants, rushes, and woody vegetation less than 20 feet in height (Cowardin *et al.*, 1979). These areas are generally dominated by wetland plants such as sensitive fern (FACW), southern arrowwood (*V. recognitum*; FACW-), common rush (FACW+), jewelweed (FACW), silky dogwood (*Cornus amomum*; FACW), southern arrowwood (FAC), and other woody and herbaceous plants. The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PEM/PSS wetlands have at least one primary indicator of hydrology and most have at least two secondary indicators.

Palustrine Emergent/Scrub-Shrub/Forested (PEM/PSS/PFO): Wetlands classified as palustrine emergent/scrub-shrub/forested are characterized by grasslike plants, true grasses, broad-leaved plants, rushes, woody vegetation less than 20 feet in height, and Two wetlands were trees greater than 20 feet in height (Cowardin et al., 1979). identified with this designation and are dominated by sensitive fern (FACW), jewelweed (FACW), both species of southern arrowwood (FAC and FACW-), an unknown Carex species, common reed (FACW), common rush (FACW+), eastern narrowleaf sedge (Carex amphibola; FAC), red osier dogwood (Cornus stolonifera; FACW+), red maple (FAC), eastern cottonwood (Populus deltoides; FAC), and white meadowsweet (Spiraea The hydrologic regime of these wetlands range from irregularly alba; FACW+). inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). Both wetlands have at least one primary indicator of hydrology and one wetland has two secondary indicators.

**Palustrine Forested (PFO):** Wetlands classified as palustrine forested are characterized by having trees greater than 20 feet in height (Cowardin *et al.*, 1979). Wetlands with this designation were generally dominated by red maple (FAC), sugar maple (*A. saccharum*; FACU-), black cherry (*Prunus serotina*; FACU), slippery elm (*U. rubra*; FAC), and other tree and woody species. The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PFO wetlands have at least one primary indicator of hydrology and most have at least two secondary indicators.

**Palustrine** Forested/Emergent (PFO/PEM): Wetlands classified as palustrine forested/emergent are characterized by having trees greater than 20 feet in height and grasslike plants, true grasses, broad-leaved plants, and rushes (Cowardin et al., 1979). The three wetlands in this category are dominated by red maple (FAC), pin oak (Quercus palustris; FACW), tuliptree (Liriodendron tulipifera; FACU), American beech (Fagus grandifolia; FACU), sugar maple (FACU-), southern arrowwood (FAC), American witchhazel (Hamamelis virginiana; FAC-), flowering dogwood (Cornus florida; FACU-), multiflora rose (Rosa multiflora; FACU), owlfruit sedge (Carex stipata; OBL), sensitive fern (FACW), an unknown Carex species, marsh violet (Viola palustris; FACW+), common reed (FACW), jewelweed (FACW), common rush (FACW+), reed canarygrass (FACW+), fox sedge (Carex vulpinoidea; OBL), longhair sedge (C. comosa; OBL), nodding sedge (C. gynandra; OBL), whitegrass (Leersia virginica; FACW), and harlequin blueflag (Iris versicolor, OBL). The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PFO/PEM wetlands have at least two primary indicators of hydrology and at least one secondary indicator.

**Palustrine Forested/Scrub-Shrub (PFO/PSS):** Wetlands classified as palustrine forested/scrub-shrub are characterized by having trees greater than 20 feet in height and woody vegetation less than 20 feet in height (Cowardin *et al.*, 1979). Wetlands within this category are generally dominated by red maple (FAC), green ash (*Fraxinus pennsylvanica*; FACW), black willow (*Salix nigra*; FACW+) southern arrowwood (FACW-), eastern poison ivy (*Toxicodendron radicans*; FAC), swamp rose (*Rosa palustris*; OBL), and other tree and ligneous species. The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PFO/PSS wetlands have at least one primary indicator.

**Palustrine Shrub-Scrub (PSS):** Wetlands classified as palustrine scrub-shrub are characterized by having woody vegetation less than 20 feet in height (Cowardin *et al.*, 1979). These wetlands are dominated by silky dogwood (FACW), both species of southern arrowwood (FAC and FACW-), glossy buckthorn (*Frangula alnus*; FAC), black willow (FACW+), and other woody species. The hydrologic regime of these wetlands

September 2007 ATSI & CEI 14946398 range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PSS wetlands have at least one primary indicator of hydrology, with most having at least two indicators, and most have at least one secondary indicator.

**Palustrine Scrub-Shrub/Emergent (PSS/PEM):** Wetlands classified as palustrine scrubshrub/emergent are characterized by having woody vegetation less than 20 feet in height and grasslike plants, true grasses, broad-leaved plants, and rushes (Cowardin *et al.*, 1979). They are dominated by silky dogwood (FACW), both species of southern arrowwood (FAC and FACW+), glossy buckthorn (FAC), swamp rose (OBL), American elm (FACW-), sensitive fern (FACW), jewelweed (FACW), common rush (FACW+), whitegrass (FACW), and other woody and herbaceous plants. The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PSS/PEM wetlands have at least one primary and secondary indicator of hydrology.

**Palustrine Scrub-Shrub/Forested (PSS/PFO):** Wetlands classified as palustrine scrubshrub/forested are characterized by having woody vegetation less than 20 feet in height and trees greater than 20 feet in height (Cowardin *et al.*, 1979). Wetlands are generally dominated by silky dogwood (FACW), southern arrowwood (FAC), blackgum (*Nyssa sylvatica*; FAC), and other woody and tree species. The hydrologic regime of these wetlands range from irregularly inundated or saturated (5 percent to 12.5 percent of the growing season) to seasonally inundated or saturated (>12.5 percent to 25 percent of the growing season) (Environmental Laboratory, 1987). All of these PSS/PFO wetlands have at least one primary indicator of hydrology, with most having two, and one secondary indicator.

*Vernal Pool Wetlands:* Vernal pools are wetlands occurring in primarily forested upland areas. The Ohio Administrative Code 3745-1-50 (as effective May 1, 1998) defines them as being shallow, temporarily flooded, depressional wetlands that are typically dry for most of the summer and fall. When flooded during spring, these wetlands act as important sites for amphibian breeding, among other biological processes.

Three vernal pools were identified within the project corridor. The Federal Geographic Data Committee *Working Draft* Wetland Mapping Standard labels these areas as Pond, natural, vernal-woodland, PD1m (Heber 2007). All three were located within upland forests composed of tree species such as American beech (FACU) and red maple (FAC). These wetlands each had one primary indicator of hydrology and one wetland had one secondary indicator.

# 3.1.6 U.S. Army Corps of Engineers Section 404 Requirements

Section 404 of the Clean Water Act requires authorization from the Secretary of the Army, acting through the ACOE, for the discharge of dredged or fill material into all waters of the United States. All wetlands delineated at the project site are considered non-isolated and therefore subject to ACOE jurisdiction as waters of the United States.

# 3.2 OEPA ORAM V5.0 WETLAND EVALUATION

The ORAM scores for the wetlands identified within the limits of the project corridor ranged from a low of 10/100 (Wetland Pr-w006) to a high of 59/100 (Wetland Pr-w065 and Pr-w070). Both wetlands that had a score of 59/100 were formed along surface drainage ways, in areas of surface water retention, and in areas of depressional forest. Copies of the ORAM scoring sheets for each delineated wetland are provided in Appendix B.

Twenty-three Category I wetlands totaling 7.4 acres were delineated along the 200-foot study corridor. Size ranged from 0.01 to 1.17 acres. Approximately 1,634 linear feet of Category I wetlands will be crossed by the proposed transmission line. Three Category I wetlands scored below 19 totaling 0.2 acres. Twenty Category I wetlands scored between 20 to 29 totaling 7.2 acres. The Category I wetlands exhibited low to moderate quality plant communities with several invasive species, low to moderate plant community interspersion, moderate to high intensity anthropogenic impact of surrounding land (i.e. farming, residential use, urban infrastructure, etc.), and recovering and/or recovered modification to natural hydrology and habitat.

Seventy-nine Category II wetlands totaling 48.2 acres were delineated along the 200-foot study corridor. Size of Category II wetlands ranged from 0.002 to 4.06 acres. Approximately 12,111 linear feet of Category II wetlands will be crossed by the proposed

transmission line. Twenty-six Category II wetlands scored between 30 to 39 totaling 10.5 acres. Twenty-one Category II wetlands scored between 40 to 49 totaling 9.5 acres. Thirty-two Category II wetlands scored between 50 to 59 totaling 28.2 acres. The Category II wetlands exhibited moderate to high quality plant communities with few invasive species, moderate to good plant community interspersion, low to high intensity anthropogenic impact of surrounding land (i.e. farming, residential use, urban infrastructure, etc.), and recovered and/or no modification to natural hydrology and habitat.

No Category III wetlands were identified within the project corridor.

# 3.3 STREAM EVALUATIONS

Methodology for evaluating streams was dependent on drainage basin size. Streams that have a drainage basin greater than one square mile were assessed using the QHEI method, and streams with a drainage basin less than one square mile were examined by recording several physical parameters.

# <u>QHEI</u>

Eight qualitative habitat evaluations (QHEI) were conducted on the streams identified within the project corridor. The evaluations were conducted at or near the proposed transmission line crossing of each stream. These streams were identified using USGS topographic maps, aerial photography, and field reconnaissance. The locations of the evaluation areas are shown on Figures 3A through 3C. Copies of the QHEI data sheets are provided in Appendix C. Selected color photographs are provided in Appendix D. Summary information for each stream is presented in Table 4.

The QHEI is designed to provide a qualitative measure of habitat that generally corresponds to those physical factors that affect fish communities and which are generally important to other aquatic life (*e.g.*, invertebrates). The quantitative measure of habitat used to calibrate the QHEI score are Indices (or Index) of Biotic Integrity (IBI) for fishes. In most instances the QHEI is sufficient to give an indication of habitat quality, and the intensive qualitative analysis is not necessary to measure the IBI. However, the IBI, rather than the QHEI, is directly correlated with the aquatic life use designation for a particular surface water. The QHEI is designed to provide a qualitative measure of

habitat that generally corresponds to those physical factors that affect fish communities and which are generally important to other aquatic life (e.g., macroinvertebrates).

The QHEI method is generally considered appropriate for streams with drainage basins greater than one square mile, if natural pools are greater than 40 cm, or if the water feature is shown as blue-line waterways on USGS 7.5-minute topographic quadrangle maps. In order to convey general stream habitat quality to the regulated public, the Ohio EPA has assigned narrative ratings to QHEI scores. The scores vary slightly for headwater streams with a watershed area less than or equal to 20 square miles (**h**) or larger streams (**l**) with a watershed area greater than 20 square miles. Narrative ratings include Very Poor (<30 h and l), Poor (30 to 42 h, 30 to 44 l), Fair (43 to 54 h, 45 to 59 l), Good (55 to 69 h, 60 to 74 l) and Excellent (70+ h, 75+ l). The field surveys identified one crossing of fair warmwater habitat (WWH) stream and seven crossings of good WWH streams, all in headwater watersheds.

Fair Warmwater Habitat Streams – The single fair warmwater habitat stream identified received a score of 43. The substrate was generally dominated by silt, cobble, and gravel pool depth did not exceed one foot

Good Warmwater Habitat Streams – The seven good warmwater habitat streams identified range in score from 55 to 64.5. The substrates of these streams are generally dominated by boulder, cobble, and hardpan. Silt, gravel, and detritus comprise a significant component of some of the streams. Pool depth does not exceed three feet and bankfull width generally does not exceed 13 feet, with the exception of stream Pr-s057 with a bankfull width of 23 feet.

# STREAMS WITH A DRAINAGE BASIN LESS THAN ONE SOUARE MILE

Streams with a drainage basin of less than one square mile were evaluated for flow regime, bankfull width, maximum pool depth, and stream length within the 200 foot corridor and 60 foot construction right of way.

Field evaluations identified seven ephemeral streams, four intermittent streams, and 41 perennial streams.

*Ephemeral Streams:* Seven ephemeral streams were identified during field investigations. The substrate composition of these streams is generally comprised of silt, leaf pack/woody debris, and cobble. At the time of observation, none of the streams had water in their channels. The bank full width generally does not exceed three feet.

*Intermittent Streams:* Four intermittent streams were identified during field investigations. The substrate composition of these streams is generally comprised of silt, sand, and leaf pack/woody debris. At the time of observation, maximum pool depth is less than four inches. The bank full width generally does not exceed five feet.

**Perennial Streams:** Forty-one perennial streams were identified during field investigations. The substrate composition of these streams is generally comprised of cobble, gravel, sand, and silt. At the time of observation, maximum pool depth is less than four inches. The bank full width generally does no exceed 11 feet.

# NON-JURISDICTIONAL ROADSIDE DITCHES

Several non-jurisdictional roadside ditches were identified during the field investigation. Although these upland ditches satisfy the three mandatory USACOE requirements to be considered jurisdictional wetlands (i.e. hydric soils, wetland hydrology, and a predominance of hydrophytic vegetation), these areas do not exhibit an ordinary high water mark, a defined bed and bank, or stream flow. According to the *Soil Survey of Geauga County, Ohio*, and *Soil Survey of Lake County, Ohio*, the mapped soil units for the roadside ditches identified along the project route are generally non-hydric. Periodic and routine maintenance, including mowing, was noted for a few of the upland ditches. The field determination regarding the potential regulation of ditches identified along the length of the project route was based upon the U.S. Army Corps of Engineers Standard Operating Procedures, 1982 and Ohio Department of Transportation's (ODOT) Technical Guidance Document, 2002.

# 3.5 THREATENED AND ENDANGERED SPECIES HABITAT SURVEY

The Ohio Department of Natural Resources – Division of Natural Areas and Preserves (ODNR-DNAP) was contacted regarding the potential for occurrence of rare, threatened, and endangered species within the project study area. URS also performed a literature review of available USFWS resources regarding species of concern in the project vicinity.

In a letter response dated August 9, 2007, the ODNR-DNAP reported no records of rare or endangered species within 1,000 feet of the project centerline.

The USFWS literature review indicated that the proposed project is located within the range of the federally endangered Indiana bat (*Myotis sodalis*).

A discussion of each state and federally listed species that could possibly be within 1,000 feet of the project centerline will be presented in the following sections. A list of animal species identified or likely to occur in the vicinity of the study site is shown in Table 1. A comprehensive list of plant species in the vicinity of the study site is shown in Table 2.

# 3.5.1 Plants

No records of plant species of concern were identified within 1,000 feet of the project centerline by agency correspondence or literature review.

## 3.5.2 Aquatic species

Habitats for aquatic species of concern including fish, crustaceans, and mussels were not assessed during this survey. ODNR-DNAP records showed no threatened or endangered species were known to exist within 1,000 feet of the project centerline.

### 3.5.3 Amphibians

No amphibian species of concern were identified in any agency correspondence.

# 3.5.4 Reptiles

No reptile species of concern were identified in any agency correspondence.

### 3.5.5 Birds

No bird species of concern were identified in any agency correspondence.

### 3.5.6 Mammals

Indiana bat (*Myotis sodalis*): The Indiana bat is considered to be an endangered species by the federal government and the State of Ohio. Records of this species exist for Geauga

and Lake Counties, Ohio, but none of the records are within 1,000 feet of the project centerline. The Indiana bat is a migratory species, wintering in a few limestone cave hibernacula principally located in Indiana, Kentucky and Missouri. Summer roosting and foraging areas are typically farther north in the glaciated regions of Indiana, Illinois, and Ohio. Males and gravid females may arrive in northern regions in April and remain until October. The bat typically roosts under the exfoliating (loose) bark of live or dead trees of various rough-barked tree species. The 8- to 10-inch size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), and elm (*Ulmus* spp.) are utilized in live form as roost trees. These tree species and many others may be used when dead, if there are adequately sized patches of loosely adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes; (1) a mixture of favored loose-barked trees with 60 to 80 percent canopy closure and (2) a low density sub-canopy (less than 30 percent between about 6 feet high and the base canopy).

The vegetation along portions of the study corridor consists of mature, second growth tree species. This general area contains many maples (*Acer* spp.), oaks (*Quercus* spp.) and elms (*Ulmus* spp.) of an appropriate class size along with exfoliating Hickories (*Carya* spp.), American sycamore (*Platanus occidentalis*) and black cherry (*Prunus serotina*) individuals. Additional Indiana bat habitat advantages in this area include snags, numerous tree cavities or hollow portions of tree boles and limbs, a generally open subcanopy, and close proximity to several mapped streams.

There are several areas along the study corridor not suitable as habitats for Indiana bats due to either no forest cover or a thick subcanopy. Specific Indiana Bat surveys were not performed during the field reconnaissance.

#### 3.5.7 Insects

ODNR-DNAP had no previous records of threatened or endangered insects within 1,000 feet of the project centerline.

#### 4.0 SUMMARY

One hundred two wetlands, totaling 55.6 acres, of 12 different Cowardin wetland types were identified within the project study area. Identified wetlands were evaluated utilizing

ORAM v5.0 qualitative evaluation method for categorizing wetlands. The ORAM scores for the wetlands indicated that 23 wetlands are Category I, and 79 wetlands are classified as Category II wetlands. All of the wetlands are considered non-isolated and jurisdictional.

Sixty streams were identified along the project corridor, eight with a drainage basin greater than one square mile, and 52 with a drainage basin less than one square mile. Streams with a drainage basin greater than one square mile were assessed using the QHEI methodology, resulting in one fair warmwater habitat stream and seven good warmwater habitat stream. There were seven ephemeral streams, four intermittent streams, and 41 perennial streams identified with a drainage basin less than one square mile.

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# TABLE 1 ANIMAL SPECIES IDENTIFIED OR LIKELY TO OCCUR IN THE STUDY AREA

Birds	<b>Reptiles and Amphibians</b>	Mammals
American crow	American toad	Coyote
American kestrel	Dusky salamander	Deer mouse
American robin	Eastern box turtle	Eastern cottontail rabbit
American woodcock	Eastern garter snake	Feral cat
Black-capped chickadee	Eastern wood frog	Fox squirrel
Blue jay	Northern green frog	House mouse
Brown-headed cowbird	Northern leopard frog	Long-tailed weasel
Canada goose	Northern spring peeper	Meadow vole
Common grackle	Smallmouth salamander	Opossum
Common snipe	Snapping turtle	Raccoon
Cooper's hawk	Spotted salamander	Red squirrel
Downy woodpecker	Western chorus frog	Red squirrel
Eastern kingbird	•	Short-tailed shrew
Eastern meadowlark		Striped skunk
European starling		White-tailed deer
Great blue heron		Woodchuck
Hairy woodpecker		Woodland vole
House finch		
Killdeer		
Mallard		
Northern cardinal		ļ
Northern flicker		
Northern harrier		
Northern mockingbird		
Red-eyed vireo		
Red-tailed hawk		
Red-winged blackbird		
Rock dove		
Rose-breasted grosbeak		
Song sparrow		
Turkey vulture		
Wild turkey		
Wood duck		
Woodcock		



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September 2007 ATSI & CEI 14946398

#### TABLE 2 MAJOR PLANT SPECIES OBSERVED OR EXPECTED TO OCCUR IN THE STUDY AREA

Acer negundo Acer rubrum Acer saccharum Acer saccharinum Achillea millefolium Acorus calamus Aesculus glabra Ageratina altissima Alisma subcordatum Alliaria petiolata Allium canadense Alnus rugosa Andropogon virginicus Apocynum cannabinum Asclepias incarnata Asclepias syriaca Aster ericoides Aster lateriflorus Aster pilosus Caltha palustris Carex intumescens Carex lupulina Carex stricta Carpinus caroliniana Carya ovata Cephalanthus occidentalis Chelone glabra Cichorium intybus Cinna arundinacea Cirsium arvense Conyza canadensis Cornus amomum Cornus foemina Cornus stolonifera Cornus racemosa Crataegus mollis Cyperus esculentus Cyperus strigosus Daucus carota Dactylis glomerata Dichanthelium clandestinum

Dipsacus fullonum Dipsacus sylvestris Echinochloa muricata Eleocharis obtusa Epilobium coloratum Epilobium hirsutum Equisetum arvense Equisetum hyemale Erythronium americanum **Eupatoriadelphus** maculatus Eupatorium perfoliatum Eupatorium rugosum Fagus grandifolia Festuca arundinacea Fraxinus pennsylvanica Gleditsia triacanthos Glyceria striata Juncus canadensis Juncus effusus Juncus torreyi Leersia orvzoides Leersia virginica Liriodendron tulipifera Lonicera japonica Ludwigia alternifolia Lysimachia nummularia Lythrum salicaria Mimulus ringens Onoclea sensibilis Penthorum sedoides Phalaris arundinacea Phragmites australis Plantago lanceolata Plantago major Poa palustris Poa pratensis Polygonum lapathifolium Polygonum pensylvanicum Polygonum sagittatum Polystichum acrostichoides Rhamnus frangula

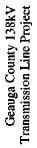
Populus deltoides Prunus serotina Ouercus alba Quercus bicolor **Ouercus** palustris Quercus rubra Rosa multiflora Rosa palustris Rubus occidentalis Rumex crispus Rumex orbiculatus Salix amygdaloides Salix discolor Salix nigra Sambucus canadensis Scirpus cyperinus Setaria faberi Setaria glauca Setaria pumila Solidago altissima Solidago canadensis Solidago gigantea Spiraea tomentosa Symphyotrichum lateriflorum Symphyotrichum pilosum Symplocarpus foetidus Taraxacum officinale Thlaspi arvense Toxicodendron radicans Typha angustifolia Typha latifolia Ulmus americana Ulmus rubra Verbena hastata Viburnum recognitum Vitis aestivalis

authr 1		ORAM	ORANI Category	Wethand Acreage	T Intern T Intern Pred	Tinpicia Adreas	Access of Forested Weised Marcell by Conversed
Pr-w001	This PSS wetland is dominated by <i>Populus heterophylla</i> , <i>Salix nigra</i> , <i>Salix spp.</i> , <i>Cornus amomum</i> , <i>Juncus effusus</i> , <i>Carex blanda</i> , <i>Carex lurida</i> , <i>Carex vulpinoidea</i> , and <i>Typha angustifolia</i> . It has water marks, drainage patterns in wetland, oxidized root channels in upper 12 <sup>°</sup> , and has water-stained leaves. Soil is silty clay 2.5Y 6/2 with mottles (many/distinct) of 7.5YR 5/8 in the A horizon and rock in the B horizon.	16	-	0.03	0	0	o
Pr-w002	This PEM/PSS wetland is dominated by <i>Juncus effusus</i> , <i>Salix rigida</i> , <i>Cornus amomum</i> , <i>Juncus tenuis</i> , <i>Carex vulpinoidea</i> , and <i>Populus deltoides</i> . It is saturated in the upper 12", has oxidized root channels in the upper 12", and passes the FAC-neutral test. Soil is silty clay 10YR 5/1 with mottles of 7.5YR 5/8 (5%) in the A horizon.	31	7	0.08	39.3	0.05	o
Pr-w003	This PEM/PSS wetland is dominated by <i>Juncus effusus</i> , <i>Salix rigida</i> , <i>Cornus amomum, Juncus tenuis, Carex vulpinoidea</i> , and <i>Populus deltoides</i> . It is saturated in the upper 12", has oxidized root channels in the upper 12", and passes the FAC-neutral test. Soil is silty clay 10YR 5/1 with mottles of 7.5YR 5/8 (5%) in the A horizon.	31	7	0.29	53.9	0.07	0
Pr-w004	This PEM/PSS/PFO wetland is dominated by <i>Onoclea sensibilis, Impatiens capensis, Viburnum dentatum, Carex</i> sp., and <i>Phragmites australis</i> . It is saturated in the upper 12". Soil is silty clay 10YR 5/1 in the A/B horizon.	54	5	0.97	250.9	0.34	0.11
Pr-w005	This PEM wetland is dominated by <i>Phragmites australis</i> . It is saturated in the upper 12" with water-stained leaves. The A horizon is silty clay 10YR 4/2 and the B horizon is silty clay 10YR 3/1.	28	1	0.01	0	0	0
Pr-w006	This PEM wetland is dominated by <i>Phragmites australis</i> . It is saturated in the upper 12" with water-stained leaves. The A horizon is silt 10YR 3/2 and the B horizon is silty clay 10YR 6/8.	10	-	0.02	0	0.001	0

September 2007 ATSI & CEI 14946398

anna an	A CONTRACTOR OF	ORAN	on the second	Walland	Linut	limpactud Accrease	Ames of Revealed Weithed Weithed Commission
	This PEM/PSS wetland is dominated by <i>Typha angustifolia</i> , <i>Acorus</i> calamus, <i>Impatiens capensis</i> , <i>Onoclea sensibilis</i> , and <i>Cornus amomum</i> . It is inundated up to 2" with water-stained leaves. The A horizon is silty clay 10YR 4/1 and the B horizon is silty loam 10YR 4/1.	52	7	0.38	116.1	0.15	o
	This PFO wetland is dominated by Ulmus americana, Rhus radicans, and Tilia americana. It is saturated in the upper 12", has water-stained leaves, and passes the FAC-neutral test. Soil is silty loam 10YR 4/2 in the A horizon and silty clay 10YR 4/1 with mottles (many/distinct) of 10YR 5/6 in the B horizon.	27	1	0.0002	0	0	o
	This PSS wetland is dominated by <i>Cornus amomum</i> . It is saturated in the upper 12" and has water-stained leaves. Soil is silty loam 10YR 4/2 in the A horizon and silty clay 10YR 4/2 with mottles (many/distinct) of 10YR 5/6 in the B horizon.	24	-	0.03	0	0.003	0
	This PSS wetland is dominated by <i>Cornus amomum</i> . It is saturated in the upper 12", has water-stained leaves, and passes the FAC-neutral test. Soil is silty loam 10YR 5/2 in the A horizon and silty clay 10YR 6/2 with mottles (many/distinct) of 10YR 6/6 in the B horizon.	22	1	0.04	0	0.01	0
	This PEM/PSS wetland is dominated by <i>Acorus americanus, Onoclea</i> sensibilis, Impatiens capensis, Cornus amonum, and Viburnum recognitum. It is saturated in the upper 12", has drainage patterns in wetland, water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 10YR 4/2 with mottles (few/distinct) of 10YR 4/4 in the A horizon and silty clay 10YR 5/1 with mottles (many/distinct) of 7.5YR 4/6 in the B horizon.	51	5	0.28	87.7	0.12	0

September 2007 ATSI & CEI 14946398



hundre		ORAM	ORAM Category	Acres		intered And a	Acres of Proceed Weiland Intertitio
Pr-w012	This PEM/PSS wetland is dominated by <i>Acorus americanus, Onoclea</i> sensibilis, Impatiens capensis, Cornus amomum, and Viburnum recognitum. It is saturated in the upper 12", has drainage patterns in wetland, water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 10YR 4/2 with mottles (few/distinct) of 10YR 4/4 in the A horizon and silty clay 10YR 5/1 with mottles (many/distinct) of 7.5YR 4/6 in the B horizon.	51	0	0.38	98.0	0.13	0
Pr-w013	This PSS/PFO wetland is dominated by <i>Viburnum dentatum</i> , <i>Onoclea</i> sensibilis, Typha angustifolia, Carex sp., Cornus amomum, and Rosa palustris. It is saturated in upper the 12" with water-stained leaves. Soil is silty loam 10YR 2/1 in the A/B horizon.	38.5	2	0.12	0	0	0
Pr-w014	This PEM wetland is dominated by <i>Acorus calamus</i> and an unknown grass. There are drainage patterns in wetland and water-stained leaves. Soil is silty clay 10YR 3/1 in the A/B horizon.	31	2	0.03	0	0.001	o
Pr-w015	This PEM/PFO wetland is dominated by <i>Viburnum dentatum</i> , <i>Impatiens capensis</i> , <i>Onoclea sensibilis</i> , and <i>Ulmus americana</i> . It is saturated in the upper 12" with water-stained leaves. The A horizon is silty loam 10YR 4/1 and the B horizon is silty clay 10YR 6/1.	45	2	0.04	0	0.001	100.0
Pr-w016	This PSS/PEM wetland is dominated by <i>Viburnum dentatum</i> , <i>Onoclea</i> sensibilis, <i>Impatiens capensis</i> , and <i>Ulmus americana</i> . It is saturated in the upper 12" with water-stained leaves. Soll is silty clay 10YR 3/1 in the A/B horizon.	44.5	7	0.02	6.7	0.01	o

Geauga County 138kV Transmission Line Project

Table 3

	<u> </u>		<u> </u>				J
Aurus of Forested Wetland that will be Converted	0	0	0	0.01	0.03	0.06	0
Impleted	0	0.02	0.11	0.02	0.07	0.15	0.12
Cosed	0	0	0.101	0	36.3	111.6	94.2
Abrada Abrada	0.02	0.07	0.20	0.15	0.17	0.44	0.31
Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Con	2	2	2	5	2	0	5
ORAM	44.5	36.5	33.5	39.5	39.5	39.5	34.5
A Contract of the second se	This PSS/PEM wetland is dominated by <i>Viburnum dentatum</i> , <i>Onoclea</i> sensibilis, <i>Impatiens capensis</i> , and <i>Ulmus americana</i> . It is saturated in the upper 12" with water-stained leaves. Soil is silty clay 10YR 3/1 in the A/B horizon.	This PEM/PSS wetland is dominated by Viburnum dentatum. Corrus amomum. Onoclea sensibilis, Juncus effusus, an unknown grass, and Toxicodendron radicans. It is inundated up to 1" with water-stained leaves. Soil is silty clay 10YR S/1 in the A/B horizon.	This PSS/PEM wetland is dominated by <i>Impatiens capensis</i> . Viburnum dentatum, Rosa patustris, Onoclea sensibilis, and Cornus amomum. It is saturated in the upper 12" with water-stained leaves. The A horizon is loam 10YR 3/2 and the B horizon is silty clay 10YR 5/1.	This PSS/PFO wetland is dominated by Nyssa sylvatica, Viburnum dentatum, Carex sp., and Cornus amonum. It is inundated up to 1" with water-stained leaves. The soil is silty clay 10YR 5/1 in the A/B horizon.	This PSS/PFO wetland is dominated by Nyssa sylvatica, Viburnum dentatum, Carex sp., and Cornus amonum. It is inundated up to 1" with water-stained leaves. The soil is silty clay 10YR 5/1 in the A/B horizon.	This PSS/PFO wetland is dominated by Nyssa sylvatica, Viburnum dentatum, Carex sp., and Cornus amomum. It is inundated up to 1" with water-stained leaves. The soil is silty clay 10YR 5/1 in the A/B horizon.	This PSS wetland is dominated by <i>Viburnum dentatum</i> , <i>Impatiens capensis</i> , <i>Onoclea sensibilis</i> , and <i>Salix</i> sp. It is inundated up to 1 inch. Soil is silt 10YR 3/1 in A/B horizon.
	Pr-w017	Pr-w018	Pr-w019	Pr-w020	Pr-w021	Pr-w022	Pr-w023

September 2007 ATSI & CEI 14946398



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<b>Them o</b>		DRAN Score	ORAM Calegory	Weiland	Linear Point Crossed	Imissied	Arres of Porestod Weishud Durwill be Converted
Pr-w024	This PFO/PSS wetland is dominated by Salix nigra. Cornus amomum. Viburum recognitum, Ribes americanum. Vitis aestivalis, Toxicodendron radicans, Rosa palustris, Glyceria striata, Impatiens capensis, and Onoclea sensibilis. It has water marks and drift lines. The A horizon is silty loam 10YR 5/1.	45.5	3	0.38	100.8	0.11	0.07
Pr-w025	This PFO/PSS wetland is dominated by Viburnum recognitum, Salix nigra, Glyceria striata, Impatiens capensis, Leersia oryzoides, and Carex lurida. It has drainage patterns in wetlands. The A horizon is 10YR 5/1.	45.5	2	1.26	108.0	0.16	0.10
Pr-w026	This PFO wetland is dominated by <i>Corrus amomum</i> , <i>Corrus sericea</i> , <i>Viburnum recognitum</i> , <i>Ribes americanum</i> , <i>Fraxinus pennsylvanica</i> , <i>Geum aleppicum</i> , <i>Salix nigra</i> , <i>Sium suave</i> , <i>Equisetum arvense</i> , and <i>Ranunculus acris</i> . It has drainage patterns in wetlands, oxidized root channels in upper 12 <sup>m</sup> and water-stained leaves. The B horizon is silt 2.5YR 5/2.	52	7	0.26	0	0.03	0.03
Pr-w027	This PEM wetland is dominated by <i>Juncus effusus, Carex</i> sp. 1, <i>Carex</i> sp. 2, <i>Trifolium pratense</i> , and <i>Poa pratensis</i> . It has water marks, drainage patterns in wetlands, and oxidized root channels in upper 12". The Aphonizon is silty loam 10YR 4/1.	20	1	0.07	0	0	0
Pr-w028	This PFO wetland is dominated by Acer saccharum, Viburuum recognitum, Ulmus rubra, Populus deltoides, Potentilla simplex, Acer rubrum, Carex vulpinoidea, and Prunus serotina. It is saturated in upper 12". Soil is silty loam 10YR 5/1 in the A/B horizon.	[†	2	0.89	169.6	0.22	0.22

Geauga County 138kV Transmission Line Project

Table 3

	Wethin the second se	ortan Soort	ORAM Clubedry	Weithind Acreage	Lincur Lincur Tam Crossed	Impacted	Acress of Portuged Weitand Iden will be Converted
E. ≒ ⊟	This PFO wetland is dominated by <i>Acer rubrum</i> and <i>Viburnum recognitum</i> . It is saturated in the upper 12", has water marks, and has drainage patterns in wetland. The A horizon is loam 10YR 5/8.	39.5	7	1.16	313.4	0.45	0.45
C & B H	This PEM/PSS wetland is dominated by <i>Viburnum recognitum</i> , <i>Phragmites australis</i> , and <i>Phalaris arundinacea</i> . It is saturated in the upper 12", has sediment deposits, water marks, drainage patterns, and oxidized root channels in the upper 12". The A horizon is loamy sand 10YR 5/1.	39.5	6	2.60	563.8	0.79	0
$  \vdash \neg \vdash  $	This PSS/PEM wetland is dominated by <i>Viburnum recognitum</i> and <i>Phalaris arundinacea</i> . It is inundated with drainage patterns in wetland. The A horizon is loam 10YR 6/1.	38	5	0.37	83.8	0.12	0
	This PEM/PFO wetland is dominated by <i>Carex</i> sp., <i>Juncus effusus</i> , <i>Ranunculus acris, Viburnum recognitum</i> , and <i>Acer rubrum</i> . It is inundated up to 6", has sediment deposits, and has drainage patterns in wetland. Soil is 10YR 5/1 in the A horizon and silt loam 2.5Y 3/1 with mottles (common/distinct) of 10YR 5/8 in the B horizon.	44	Ю	1.06	332.2	0.45	0.18
	This POW wetland is a vernal pool with no vegetation. It is inundated up to 12". Soil is silt 10YR 6/1 with mottles (few/distinct) of 10YR 5/8.	47	2	0.06	4.3	0.03	0
L r r r r r r r r r r r r r r r r r r r	This PEM/PSS wetland is dominated by <i>Viburuum recognitum</i> , <i>Ulmus</i> rubra, Toxicodendron radicans, Typha latifolia, Phalaris arundinacea, and Salix nigra. It is saturated in the upper 12", has drainage patterns in wetland, and has water-stained leaves. Soil is 10YR 5/1 in the A horizon and silt loam 2.5Y 3/1 with mottles (common/distinct) of 10YR 5/8 in the B horizon.	54	2	1.48	421.8	0.58	0

September 2007 ATSI & CEI 14946398

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Table 3

dentra		DRAN	OR AN	Wehned	Linear Threat Conset	Inpactual	Annes of Foreaced Wethand Districted Converted
Pr-w035	This PSS/PFO wetland is dominated by <i>Viburnum recognitum</i> , <i>Cornus amonum</i> , <i>Rubus allegheniensis</i> , <i>Fraxinus pennsylvanica</i> , <i>Salix nigra</i> , <i>Carex crinita</i> , <i>Carex amphibola</i> , and <i>Impatiens capensis</i> . It is saturated in the upper 12", has drainage patterns in wetland, and has oxidized root channels in upper 12". Soil is 10YR 3/1 in the A horizon and silty loam 2.5Y 5/1 with mottles (common/distinct) of 10YR 5/8 in the B horizon.	55	6	2.13	583.0	0.83	0.33
Pr-w036	This PFO/PSS wetland is dominated by <i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , <i>Toxicodendron radicans</i> , and <i>Vitis vulpina</i> . It is saturated in the upper 12" with sediment deposits, has drainage patterns, oxidized root channels in the upper 12", and water-stained leaves. The A horizon is 10YR 3/1 and the B horizon is loam 2.5YR 5/1.	55	7	1.71	410.8	0.61	0.37
Pr-w037	This PFO/PSS wetland is dominated by <i>Acer rubrum, Fraxinus pennsylvanica, Toxicodendron radicans,</i> and <i>Vitis vulpina.</i> It is saturated in the upper 12" with sediment deposits, has drainage patterns, oxidized root channels in the upper 12", and water-stained leaves. The A horizon is 10YR 3/1 and the B horizon is loam 2.5YR 5/1.	55	5	1.06	323.0	0.43	0.26
Pr-w038	This PFO/PSS wetland is dominated by <i>Populus deltoides</i> , <i>Viburnum recognitum</i> , <i>Onoclea sensibilis</i> , <i>Acer rubrum</i> , <i>Toxicodendron radicans</i> , and <i>Fraxinus pennsylvanica</i> . It is saturated in the upper 12" with drainage patterns and oxidized root channels in the upper 12". The A horizon is 10YR 3/1 and B horizon is silty loam 2.5YR 5/1.	55	7	0.12	20.5	0.04	0.02

Geauga County 138kV Transmission Line Project

Table 3

This BECORSE weekers in the Percenting of the Pe		ORAM State	DRAM DRAM Gate Son	Wetland	Linear- Fret Crosso	Alimitetee	Acres of Porcend Mathai Lankai ab Converted
This PFO/PSS welland is dominated by <i>Populus defloides, Viburnum</i> recognitum, Onoclea sensibilis, Acer rubrum, Toxicodendron radicans, and Fraxinus pennsylvanica. It is saturated in the upper 12" with drainage patterns and oxidized root channels in the upper 12". The A horizon is 10YR 3/1 and B horizon is silty loam 2.5YR 5/1.	Poputus dettoides, Viburnum brum, Toxicodendron radicans, and in the upper 12" with drainage e upper 12". The A horizon is 5YR 5/1.	55	7	1.30	398.5	0.54	0.33
This PSS/PEM wetland is dominated by <i>Viburuum recognitum</i> , Salix nigra, Carex tribuloides, Corrus stolonifera, Juncus effusus, Carex amphibola, Equisetum arvense, Impatiens capensis, Onoclea sensibilis, and Euthamia graminifolia. It is saturated in the upper 12" with oxidized root channels in upper 12" and water-stained leaves. The A horizon is 10YR 3/1 and the B horizon is loam 10YR 5/2.	Viburnum recognitum, Salix nigra, uncus effusus, Carex amphibola, Onoclea sensibilis, and Euthamia 12" with oxidized root channels in A horizon is 10YR 3/1 and the B	28		1.17	0	0	0
This PSS wetland is dominated by <i>Carex amphibola</i> , <i>Viburnum</i> <i>recognitum</i> , and <i>Euthamia graminifolia</i> . It has drainage patterns in wetland. The A horizon is 2.5YR 3/3 and the B horizon is silt 2.5YR 5/2.	camphibola, Viburnum It has drainage patterns in d the B horizon is silt 2.5YR 5/2.	28	1	0.27	106.7	0.12	0
This PSS wetland is dominated by <i>Carex amphibola</i> , <i>Viburnum recognitum</i> , and <i>Euthannia graminifolia</i> . It has drainage pattern wetland. The A horizon is 2.5YR 3/3 and the B horizon is silt 2	x amphibola, Viburnum It has drainage patterns in d the B horizon is silt 2.5YR 5/2.	28	1	0.41	172.6	0.24	0
This PEM wetland is dominated by <i>Juncus effusus</i> , <i>Phalaris arundinacea</i> , <i>Ranunculus acris</i> , and <i>Carex</i> sp. It is saturated in the upper 12", has drainage patterns in wetland, has water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 2.5Y 4/2 in the A horizon and silty clay 2.5Y 5/1 with mottles (common/distinct) of 10YR 5/8 in the B horizon.	<i>Phalaris arundinacea</i> , te upper 12", has es, and passes the FAC- zon and silty clay 2.5Y the B horizon.	20	1	0.71	193.6	0.26	O

September 2007 ATSI & CEI 14946398

Table 3

Acres of Boreseed Nethand Hat war to Consider	0	Ģ	0	0.13
	0.40	0.31	O	0.13
ЦЦ,	291.6	230.9	Q	85.4
	0.83	0.73	0.04	0.41
COLUMN	-	5	5	2
ORAN Serie	24	33	57	57.5
	This PSS wetland is dominated by <i>Juncus effusus</i> , <i>Viburnum dentatum</i> , <i>Fraxinus pennsylvanica</i> , <i>Quercus palustris</i> , <i>Salix nigra</i> , <i>Salix lucida</i> , <i>Impatiens capensis</i> , <i>Carex vulpinoidea</i> , <i>Onoclea sensibilis</i> , and <i>Cornus</i> <i>amonum</i> . It is saturated in the upper 12", has drainage patterns in wetland, has oxidized root channels in upper 12", has water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 2.5Y 5/1 with mottles (common/distinct) of 10YR 6/8 in the A/B horizon.	This PEM wetland is dominated by <i>Viburnum dentatum</i> , <i>Onoclea</i> sensibilis, Cornus amomum, Fraxinus pennsylvanica, Prunus serotina, Acer rubrum, Juncus effusus, and Typha angustifolia. It is saturated in the upper 12", has water marks, has drainage patterns in wetland, has water- stained leaves, and passes the FAC-neutral test. Soil is silty clay 10YR 3/2 in the A horizon and silty clay 2.5Y 4/1 with mottles (few/distinct) of 10YR 5/6 in the B horizon.	This PFO/PEM wetland is dominated by Liriodendron tulipifera, Fagus grandifolia, Acer saccharum, Juncus effusus, Viburnum dentatum, Acer rubrum, Hamamelis virginiana, Onoclea sensibilis, Phalaris arundinacea, and Cornus florida. It is saturated in the upper 12", has water marks, and has water-stained leaves. Soil is silty clay 7.5YR 5/1 with mottles (common/distinct) of 7.5YR 4/6 in the A/B horizon.	This PFO wetland is dominated by <i>Acer rubrum</i> . Viburnum recognitum, Lycopodium clavatum, and Lindera benzoin. It is inundated up to 12". Soli is slit loam 10YR 3/1 with mottles (few/distinct) in the A horizon.
	Pr-w044	Pr-w045	Pr-w046	Pr-w047

September 2007 ATSI & CEI 14946398

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Access of Forcested Watimut	0.19	0.38	0:30	0
Autos	0.48	1.15	0.50	00000
<u>I</u> I	337.0	853.9	362.2	o
T. Wettand	1.32	2.59	1.25	0.02
Category	2	10	7	5
ORAM	57.5	57.5	57.5	53.5
A Contract of the second s	This is a vernal pool POW/PFO wetland. It is dominated by Acer rubrum, Viburnum recognitum, Lycopodium clavatum, and Lindera benzoin. It is inundated up to 12". Soil is silt loam 10YR 3/1 with mottles (few/distinct) in the A horizon.	This PEM/PSS/PFO wetland is dominated by Onoclea sensibilis, Juncus effusus, Carex amphibola, Cornus stolonifera, Viburnum recognitum, Acer saccharum, Populus deltoides, and Spiraea alba. It is saturated in the upper 12" and has drainage patterns in wetland. Soil is 10YR 6/1 with mottles (many) of 10YR 5/8 in the A horizon.	This PFO/PSS is dominated by <i>Viburnum recognitum, Impatiens capensis,</i> <i>Erythronium americanum, Geum aleppicum, Crataegus sp., Salix nigra,</i> <i>Cornus stolonifera, Onoclea sensibilis,</i> and <i>Carex tribuloides.</i> It is saturated in the upper 12", has water marks, has drift lines, and drainage pattern in wetland. Soil is 10YR 4/1 with mottles of 10YR 4/6 in the A horizon and silt loam 10YR 6/1 with mottles (many/distinct) of 10Y 4/6 in the B horizon.	This PEM wetland is dominated by <i>Boehmeria cylindrica</i> , <i>Carex</i> sp., <i>Lindera benzoin</i> , <i>Lysimachia ciliata</i> , and <i>Rudbeckia laciniata</i> . It is saturated in the upper 12", has drainage patterns in wetlands, has water- stained leaves, and passes the FAC-neutral test. Soil is silty loam 10YR 5/1 with mottles (5%) of 7.5YR 5/8
a supervised of the second	Pr-w048	Pr-w049	Pr-w050	Pr-w051

September 2007 ATSI & CEI 14946398





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Acresol Torested Wettand than with the Converted	0.06	0.22	0.21	0
Turbierd Acres	0.10	0.36	0.21	0
C Tea	68.3	382.2	146.2	Q
Wednind Acreage	0.30	1.13	0.82	0.01
ORAN Green	2	2	2	2
ORAN	53.5	53.5	53.5	53.5
	This PFO/PSS wetland is dominated by <i>Carex lupulina</i> , an unknown grass, <i>Rhamnus frangula</i> , <i>Acer rubrum</i> , and <i>Rosa palustris</i> . It is saturated in the upper 12", has drainage patterns in wetland, has water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 10YR 6/1 with mottles (20%) of 10YR 6/1 in the A horizon and silty clay 10YR 4/1 with mottles (5%) of 10YR 5/6 in the B horizon.	This PFO/PSS wetland is dominated by <i>Carex lupulina</i> , an unknown grass, <i>Rhamnus frangula</i> , <i>Acer rubrum</i> , and <i>Rosa palustris</i> . It is saturated in the upper 12", has drainage patterns in wetland, has water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 10YR 6/1 with mottles (20%) of 10YR 6/1 in the A horizon and silty clay 10YR 4/1 with mottles (5%) of 10YR 5/6 in the B horizon.	This PFO wetland is dominated by Acer rubrum, Acer saccharum, Ulmus rubra, Viburum recognitum, Erythronium americanum, Onoclea sensibilis, Prunus serotina, and Toxicodendron radicans. It is inundated up to 5", has water marks, has drift lines, and has drainage patterns in wetlands. Soil is 10YR 3/1 in the A horizon and silt loam 10YR 5/1 with mottles (many/distinct) in the B horizon.	This PFO wetland is dominated by Acer rubrum, Acer saccharum, Ulmus rubra, Viburnum recognitum, Erythronium americanum, Onoclea sensibilis, Prunus serotina, and Toxicodendron radicans. It is inundated up to 5", has water marks, has drift lines, and has drainage patterns in wetlands. Soil is 10YR 3/1 in the A horizon and silt loam 10YR 5/1 with mottles (many/distinct) in the B horizon.
Identifier	Pr-w052	Pr-w053	Pr-w054	Pr-w055

Geauga County 138kV Transmission Line Project

Table 3

September 2007 ATSI & CEI 14946398

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Actes of Portesid Vediand Itian Vill Jos Converted	0.16	0.03	1.43	0.43
Activity	0.16	0.03	1.43	0.72
Litteat Freet Creased	131,9	0	1045.2	518.9
Wettend	0.16	0.03	4.06	1.84
OKAM Webnid Category Adresse	5	5	2	7
ORAM	53.5	53.5	53.5	42
	This PFO wetland is dominated by Acer rubrum, Acer saccharum, Ulmus rubra, Viburnum recognitum, Erythronium americanum, Onoclea sensibilis, Prunus serotina, and Toxicodendron radicans. It is inundated up to 5", has water marks, has drift lines, and has drainage patterns in wetlands. Soil is 10YR 3/1 in the A horizon and silt loam 10YR 5/1 with mottles (many/distinct) in the B horizon.	This PFO wetland is dominated by Acer rubrum, Acer saccharum, Ulmus rubra, Viburnum recognitum, Erythronium americanum, Onoclea sensibilis, Prunus serotina, and Toxicodendron radicans. It is inundated up to 5", has water marks, has drift lines, and has drainage patterns in wetlands. Soil is 10YR 3/1 in the A horizon and silt Joam 10YR 5/1 with mottles (many/distinct) in the B horizon.	This PFO wetland is dominated by Acer rubrum, Acer saccharum, Ulmus rubra, Viburnum recognitum, Erythronium americanum, Onoclea sensibilis, Prunus serotina, and Toxicodendron radicans. It is inundated up to 5", has water marks, has drift lines, and has drainage patterns in wetlands. Soil is 10YR 3/1 in the A horizon and silt loam 10YR 5/1 with mottles (many/distinct) in the B horizon.	This PFO/PSS wetland is dominated by Viburnum recognitum, Fraxinus pennsylvanica, Carex amphibola, Impatiens capensis, Rosa multiflora, Ulmus rubra, Cornus sericea, and Phalaris arundinacea. It is inundated up to 1", has sediment deposits, and drainage patterns in wetland. Soil is silt loam 2.5Y 3/1 with mottles (many/distinct) of 10YR 3/6 in the A horizon.
	Pr-w056	Pr-w057	Pr-w058	Pr-w059

September 2007 ATSI & CEI 14946398

Table 3

an a		ORAM Stores	ORAM ORAM Weiting Score Category Acremo	Value			Arread Forested Pressure their will be Converted
Pr-w060	This PSS/PEM wetland is dominated by <i>Cornus amonum</i> , <i>Ulmus</i> americana, Rosa palustris, Impatiens capensis, and <i>Carex</i> sp. It is saturated in the upper 12" with water-stained leaves. The soil is silty clay 10YR 4/6 in the A/B horizon.	45.5	5	0.76	221.6	0.31	o
Pr-w061	This PEM wetland is dominated by <i>Juncus effusus</i> , <i>Ranunculus</i> sp., and <i>Carex</i> sp. It is saturated in upper 12" with oxidized root channels in upper 12". The A horizon is silty loam 10YR 4/1 and the B horizon is silty loam 2.5YR 6/2.	16	1	0.12	0	0.01	0
Pr-w062	This PSS wetland is dominated by <i>Corrus amomum</i> , <i>Viburnum dentatum</i> , <i>Rosa palustris</i> , and <i>Juncus effusus</i> . It is saturaled in upper 12", has water- stained leaves, and passed the FAC-neutral test. The A horizon is silty loam 10YR 4/1 and the B horizon is silty clay 10YR 5/1.	32	2	0.37	114.9	0.16	0
Pr-w063	This PSS/PFO wetland is dominated by <i>Viburnum dentatum</i> , Nyssa sylvatica, Cornus amonum, and Acer rubrum. It is saturated in the upper 12", has water-stained leaves, and passes the FAC-neutral test. The A horizon is silt 10YR 4/1 and the B horizon is clay 10YR 5/1.	51	2	0.88	263.0	0.36	0.15
Pr-w064	This PEM/PSS wetland is dominated by <i>Impatiens capensis</i> , <i>Viburnum dentatum</i> , and <i>Carex</i> sp. It is inundated up to 1" with water-stained leaves. Soil in the A horizon is silt 10YR 3/1.	43.5	2	0.18	0	0	0

September 2007 ATSI & CEI 14946398

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Later Street of Distances			
Arris af Forester Forester Metiand Ana vill be Converted	o	•	0
Adrease	0.21	0.37	0.28
Linuar Pres Crossed	176.4	264.1	197.8
Weiling	0.73	1.10	1.06
ORAN Calegory	7	ю	5
outh Serre	59	35	57
	This PSS/PEM wetland is dominated by Glyceria striata, Carex lupulina, Onoclea sensibilis, Leersia oryzoides, Rhamnus frangula, Viburnum recognitum, and Impatiens capensis. It has water marks, drift lines, sediment deposits, and drainage patterns in wetland, oxidized root channels in upper 12", and water-stained leaves. Soil is silt clay 10YR 4/1 with mottles (few/distinct) of 10YR 5/6 in the A horizon and loamy clay 10YR 5/1 with mottles (many/distinct) of 10Y 4/6 in the B horizon.	This PSS/PEM wetland is dominated by <i>Populus deltoides</i> , <i>Salix nigra</i> , <i>Comus amomum</i> , <i>Juncus effusus</i> , <i>Rosa palustris</i> , <i>Toxicodendron radicans</i> , <i>Viburnum recognitum</i> , <i>Spiraea tomentosa</i> , <i>Carya lacinosa</i> , and <i>Leersia</i> <i>oryzoides</i> . It has drainage patterns in wetland, has oxidized root channels in the upper 12", and passes the FAC-neutral test. Soil is silt loam 10YR 3/1 with mottles (few/distinct) of 10YR 6/8 in the A horizon.	This PSS/PEM wetland is dominated by <i>Corrus amonum</i> , <i>Rhamnus</i> frangula, Viburnum recognitum, Epilobium hirsutum, Leersia oryzoides, Onoclea sensibilis, Lysimachia ciliata, and Polygonum persicaria. It is saturated in upper 12" and has oxidized root channels. Soil is silty clay 10YR 4/1 with mottles (many/faint) of 10YR 5/6 in the A horizon.
Ramidica	Pr-w065	Pr-w066	Pr-w067

September 2007 ATSI & CEI 14946398



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Acres of Present Weitand Ular will ho Converted	o	0	0.11	o	0
Altered a	80.0	0	0.11	0.62	0
Linear Linear	59.1	0	71.8	456.3	0
Wethind Aureage	0.35	0.11	0.56	1.51	0.21
	7	2	5	2	7
Sec.	55.5	45	59	46	43
	This PSS wetland is dominated by <i>Cephalanthus occidentalis</i> , <i>Viburnum recognitum</i> , <i>Cornus amomum</i> , <i>Onoclea sensibilis</i> , <i>Leersia oryzoides</i> , <i>Acer rubrum</i> , <i>Rhamus frangula</i> , <i>Rosa palustris</i> , <i>Spiraea tomentosa</i> , and <i>Scirpus atrovirens</i> . It is saturated in the upper 12", has water marks, and has water-stained leaves. Soil is muck 10YR 6/1 in the A horizon.	This PSS wetland is dominated by <i>Toxicodendron radicans, Rhamnus frangula, Viburnum recognitum, Carex intumescens,</i> and <i>Onoclea sensibilis.</i> It has water marks, drift lines, and water-stained leaves. Soil is silt loam IOYR 4/1 with mottles of 10YR 5/8 in the A horizon.	This PFO wetland is dominated by Carex intumescens, Cephalanthus occidentalis, Corrus amonum, Onoclea sensibilis, Viburnum recognitum, Acer rubrum, Toxicodendron radicans, and Rhamnus frangula. It is saturated in the upper 12", has water marks, sediment deposits, and drainage patterns in wetland. Soil is 10YR 2/1 in the A horizon.	This PSS wetland is dominated by <i>Populus tremuloides</i> , <i>Viburnum recognitum</i> , <i>Rhamnus frangula</i> , <i>Acer rubrum</i> , <i>Glyceria striata</i> , and <i>Phragmites australis</i> . It has drainage patterns in the wetland, oxidized root channels in the upper 12 <sup>*</sup> , and water-stained leaves. Soil is	This PEM/PSS wetland is dominated by <i>Juncus effusus</i> , <i>Scirpus atrovirens</i> , <i>Carex lurida</i> , <i>Rhamnus frangula</i> , and <i>Viburnum recognitum</i> . It has drainage patterns in wetland, oxidized root channels in the upper 12", water-stained leaves, and passes the PAC-neutral test. Soil is silty loam 2.5Y 5/1 with mottles (many/distinct) of 10YR 5/8 in the A horizon.
	Pr-w068	Pr-w069	Pr-w070	Pr-w071	Pr-w072

Geauga County 138kV Transmission Line Project

Table 3

This PSS wetland is dominated by <i>Phalaris arundinacea, Cornus amomum, Viburnum recognitum, Cornus amomum,</i> and <i>Carex vulpinoidea.</i> It is saturated in the upper 12", has water-stained leaves, and passes the FAC-neutral test. The B horizon is 10.5YR 4/6.
This PSS wetland is dominated by <i>Phalaris arundinacea</i> , <i>Cornus amomum</i> , <i>Viburnum recognitum</i> , <i>Cornus amonum</i> , and <i>Carex vulpinoidea</i> . It is saturated in upper 12 inches with water-stained leaves and passes the FAC-Neutral Test. The B horizon is .5YR 4/6.
This PEM/PSS wetland is dominated by <i>Juncus effusus</i> , <i>Cornus amomum</i> , <i>Carex vulpinoidea</i> , and <i>Scirpus cyperinus</i> . It is saturated in the upper 12". The A horizon is 2.5YR 4/1 and the B horizon is 2.5YR 5/6.
This PEM/PSS wetland is dominated by <i>Onoclea sensibilis, Juncus effusus,</i> <i>Carex vulpinoidea, Cornus amonum</i> , and <i>Viburnum recognitum</i> . It is saturated in the upper 12". The A horizon is 10YR 4/3 and the B horizon is 2.5YR 5/2.
This PSS/PEM wetland is dominated by <i>Onoclea sensibilis</i> , <i>Viburnum dentatum</i> , <i>Corrus amonum</i> , and an unknown grass. It is inundated up to 1", has water-stained leaves, and passes the FAC-Neutral test. Soil is silty clay 10YR 5/1 in the A/B horizon.
This PEM/PSS wetland is dominated by <i>Onoclea sensibilis</i> , <i>Viburnum dentatum</i> , and unknown grass, with Nyssa sylvatica at the edges of wetland. It is inundated up to 1" and has water-stained leaves. The A horizon is silt 10YR 5/1 and the B horizon is silty clay 10YR 5/1.

September 2007 ATSI & CEI 14946398

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Acres of Portstead Wetland Wetland Unar will his Converteed	0.001	0	0	0.02
lingieted Acreage	0.002	0	0.01	0.03
Linea Feet	0	0	0	0
Watand	0.02	0.19	0.04	0.19
ORAM Category	2	2	7	2
oran Sent	52.5	34	41	36
and the second se	This PEM/PFO wetland is dominated by <i>Impatiens capensis</i> , <i>Toxicodendron radicans</i> , and <i>Betula allegheniensis</i> . It is inundated up to 2", has drainage patterns in wetland, has water-stained leaves, and is listed as a hydric soil on local soil survey data. Soil in the A horizon is silt 10YR 2/1 and the B horizon is silty clay 10YR 5/1.	This PSS/PEM wetland is dominated by <i>Juncus effusus</i> , <i>Viburnum dentatum</i> , and <i>Rhamnus frangula</i> . It is inundated up to 1". A horizon is silty clay 10YR 4/1 and the B horizon is silty clay 10YR 6/1.	This PEM wetland is dominated by <i>Onoclea sensibilis</i> , <i>Polygonum persicaria</i> , <i>Toxicodendron radicans</i> , <i>Carex stipata</i> , <i>Scirpus</i> spp., <i>Juncus effusus</i> , and <i>Typha angustifolia</i> . It is saturated in the upper 12", has oxidized root channels in the upper 12", has water-stained leaves, and passes the FAC-neutral test. Soil is silt loam 10YR 4/2 in the A horizon and silt loam 5Y 5/2 with mottles (common) of 5Y 5/3 in the B horizon.	This PFO/PEM wetland is dominated by <i>Carex stipata</i> , <i>Onoclea sensibilis</i> , <i>Carex</i> spp., <i>Viola palustris</i> , <i>Phragmites australis</i> , <i>Acer rubrum</i> , <i>Impatiens capensis</i> , and <i>Quercus palustris</i> . It is inundated up to 2", has water marks, drainage patterns in wetland, and passes the FAC-neutral test. Soil is 2.5Y 3/2 in the A horizon and silty clay 5Y 6/2 with mottles (many) of 5Y 3/2 in the B horizon.
Identified	Pr-w079	Pr-w080	Pr-w081	Pr-w082

Geauga County 138kV Transmission Line Project

Acres of Impacted Torrested Acreated Acreated Intrimit for Converted	0	0.27 0	0.37 0	0.12 0.12	0.00001
A LEASE	0	216.0	272.3	93.7	0
Martin Arrest	0.03	0.79	1.14	0.14	0.35
			г	7	2
ORAMI	27	24	27	47	49
A Constraint of the second of the	This PEM/PSS wetland is dominated by <i>Impatiens capensis</i> , <i>Onoclea</i> sensibilis, and <i>Viburnum dentatum</i> . It is saturated in the upper 12", has water-stained leaves, and passes the FAC-Neutral test. Soil in the A horizon is silt 10YR 5/2 and 10YR 4/1 with mottles of 10YR 5/8 in the B horizon.	This PEM wetland is dominated by <i>Phragmites australis</i> . It is saturated in the upper 12", has oxidized root channels in upper 12", has water-stained leaved, and passes the FAC-neutral test.	This PEM wetland is dominated by <i>Phragmites australis</i> and <i>Impatiens capensis</i> . It has drainage patterns in wetland. Soil is 10YR 6/1 with mottles (many) of 10Y 4/4 in the A horizon.	This PFO wetland is dominated by <i>Acer rubrum</i> , <i>Onoclea sensibilis</i> , <i>Toxicodendron radicans</i> , <i>Carex amphibola</i> , and <i>Glyceria striata</i> . It is saturated in the upper 12", has oxidized root channels in the upper 12", and has water-stained leaves. Soil is loam 10YR 4/1 with mottles (few) of 10YR 5/5 in the A horizon.	This PFO wetland is dominated by Acer rubrum, Onoclea sensibilis, Toxicodendron radicans, Carex amphibola, Rhamnus frangula, Viburnum recognitum, Impatiens capensis, and Ulmus americana. It is saturated in the upper 12", has sediment deposits, and has water-stained leaves. Soil is 10YR 411 with mottles of 10VR 515
taunte ista	Pr-w083	Pr-w084	Pr-w085	Pr-w086	Pr-w087

September 2007 ATSI & CEI 14946398

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Pr-w088	This PEM wetland is dominated by <i>Onoclea sensibilis, Juncus</i> effusus, <i>Carex</i> spp., <i>Acer rubrum</i> , and <i>Viburnum dentatum</i> . It is inundated, has water marks, drift lines, sediment deposits, oxidized root channels, and water-stained leaves. Soil is SY 5/2 with mottles of 10YR 3/6 in the A horizon and 5Y 7/1 with mottles (many) of 2.5Y 6/8 in the B horizon.	25	1	0.02	0	0.01	0
Pr-w089	This PEM wetland is dominated by <i>Carex stipata</i> , <i>Glyceria</i> spp., <i>Impatiens capensis</i> , <i>Rosa multiflora</i> , and <i>Lindera benzoin</i> . It is saturated in the upper 12", has water marks, drift lines, sediment deposits, drainage patterns in wetland, oxidized root channels, water-stained leaves, and passes the FAC-neutral test. Soil is silty clay 5Y 4/2 with mottles (common) of 2.5Y 6/2 in the A/B horizon.	<del>4</del> 6	5	0.01	S S	0.01	0
Pr-w090	This PEM wetland is dominated by <i>Onoclea sensibilis</i> and <i>Viburnum dentatum</i> . It is inundated up to 1", has water marks, sediment deposits, drainage patterns in wetland, oxidized root channels, water-stained leaves, and passes the FAC-neutral test. Soil is 10YR 3/1 in the A horizon and 2.5Y 4/2 with mottles of 10YR 5/6 in the B horizon.	45	2	0.002	0	0	0
Pr-w091	This PEM wetland is dominated by <i>Carex stipata, Impatiens capensis, Juncus effusus, Rosa multiflora, Acer rubrum,</i> and <i>Onoclea sensibilis.</i> It is inundated up to 2", has water marks, has sediment deposits, has oxidized root channels in upper 12", has water-stained leaves, and passes the FAC-neutral test. Soil is sandy loam 10YR 4/1 with mottles (many/distinct) of 10YR 6/8 in the A/B horizon.	34	5	0.03	0	0	0

Geauga County 138kV Transmission Line Project

Acres of formsuch Wenand Mervill fo Converted	0	0	0.37	0
And the second se	0	o	0.62	0.37
Linut Tinut Crossed	o	o	449.2	291.4
Adresse	0.02	0.04	1.88	1.19
ORAM Category	а	5	7	2
ORWW State	41	57	55	30
Network of the second se	This PFO wetland is dominated by <i>Acer rubrum, Pinus strobus, Fagus grandifolia, Liriodendron tulipifera, Onoclea sensibilis,</i> and <i>Rosa multiflora.</i> It is saturated in upper 12", has water marks, and has water-stained leaves. Soil is silty clay 10YR 4/1 with mottles (few/distinct) of 10YR 3/6 in the A horizon and silty clay 2.5Y 6/1 with mottles (common/distinct) of 10YR 3/3 in the B horizon.	This PEM/POW wetland is a vernal pool. It is dominated by <i>Fagus grandifolia</i> , <i>Acer rubrum</i> , and <i>Podophyllum peltatum</i> . It is inundated up to 6" and has water-stained leaves. Soil is clay loam Gley1 3/N with mottles (few/discrete) of 10YR 3/6 in the A horizon and clay loam Gley1 5/N in the B horizon.	This PFO/PEM wetland is dominated by Onoclea sensibilis, Impatiens capensis, Phalaris arundinacea, Carex vulpinoidea, Carex comosa, Carex gynandra, Leersia virginica, Juncus effusus, Rosa multiflora, Iris versicolor, and Viburnum dentatum. It is inundated up to 2", has water marks, has water-stained leaves, and passes the FAC-neutral test. Soil is clay loam 10YR 3/1 with mottles (few/faint) of 10YR 3/3 in the A/B horizon.	This PEM wetland is dominated by <i>Juncus effusus</i> and <i>Scirpus cyperinus</i> . It is saturated in the upper 12" and has drainage patterns in wetland. Soil is silty clay 10YR 5/1 with mottles (10%) of 10YR 5/7 in the A horizon and silty clay 10YR 6/1 with mottles (10%) of 10YR 5/7 in the B horizon.
Mentifier	Pr-w092	Pr-w093	Pr-w094	Pr-w095

September 2007 ATSI & CEI 14946398

Table 3

<b>Tabutke</b>		ORAM Score	ORAMI Category	Wethind Accents	Lines Lines Crossed	in the second	Acres of Foctsted Wetland That will be Converted
Pr-w096	This PEM/PSS wetland is dominated by <i>Salix</i> sp., <i>Comus amomum</i> , <i>Impatiens capensis, Onoclea sensibilis</i> , and an unknown fern. It is saturated in the upper 12", has water-stained leaves, and passes the FAC- neutral test. Soil is sitt loarn 10YR 3/1 in the A horizon. and silt clay 10YR 5/1 in the B horizon.	22	I	0.08	0	0	0
Pr-w097	This PEM wetland is dominated by <i>Typha angustifolia</i> , <i>Carex</i> sp. 1, an unknown mustard, <i>Eupatorium perfoliatum</i> , <i>Carex</i> sp. 2, and <i>Impatiens capensis</i> . It is inundated up to 2 <sup>n</sup> . Soil is silt 10YR 2/1 in the A horizon and silty sand 10YR 6/1 with mottles (few) of 10YR 5/6 in the B horizon.	41.5	7	0.61	215.4	0.28	0
Pr-w098	This PEM wetland is dominated by <i>Juncus effusus</i> and <i>Scirpus cyperinus</i> . It is saturated in upper 12" and has water-stained leaves. Soil is loam 10YR 3/2 in the A horizon and loamy clay 10YR 6/2 with mottles (many) of 10Y 5/8.	23	-	0.14	0	0	0
Pr-w099	This PEM/PFO wetland is dominated by <i>Impatiens capensis</i> , <i>Toxicodendron radicans, Carpinus caroliniana, Sambucus canadensis</i> , and <i>Cardamine douglassii</i> . It is inundated up to 1", has water-stained leaves, and passes the FAC-neutral test. Soil in A/B horizon is clay 10YR 4/1.	36	7	0.19	125.7	0.10	0.04
Pr-w100	This PEM wetland is dominated by <i>Onoclea sensibilis</i> and <i>Juncus effusus</i> . It is inundated up to 1" and has water-stained leaves. The A horizon is silty clay 10YR 5/2 with mottles (common) of 10YR 5/6 and the B horizon is clay 10YR 5/1 with mottles (common) of 7.5YR 4/4.	.28	1	0.10	11.7	0.02	0

Geauga County 138kV Transmission Line Project

Table 3

September 2007 ATSI & CEI 14946398

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A N
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TABLE 3.

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Access Forester Metland Hall will be Converted	0.40	o
Cheek Innacced Free Innacced Crossed	0.40	0.02
Chear Pres Creat	337.5	32.4
	1.17	0.04
DOLANI ORANI Madand Sote Calegory Accente	-	2
ORAN Boote	29	32
	This PFO wetland is dominated by <i>Acer rubrum, Juncus effusus, Viburnum dentatum, Carex stipata, Carex</i> sp., and <i>Rhamtus frangula</i> . It is saturated in the upper 12", has water marks, has water-stained leaves, and passes the FAC-neutral test. Soil is clay 10YR 4/1 with mottles of 10YR 6/8 (common/distinct) in the A/B horizon.	This PEM wetland is dominated by <i>Phalaris arundinacea</i> , <i>Impatiens capensis</i> , and <i>Acer rubrum</i> . It is saturated in the upper 12", has water marks and oxidized root channels, and passes the FAC-neutral test. Soil is sandy silt 10YR 3/1 with mottles (few/fine) of 10YR 4/6 in the A horizon and silty clay Gley1 5/1 5GY in the B horizon.
lieuthe	Pr-w101	Pr-w102

September 2007 ATSI & CEI 14946398

Table 3

Plov Regime
Stream Pr-s001 has a moderate (5-10m) riparian width to the left , and a narrow (<5m) riparian width to the right of the channel. The riparian corridor is comprised of deciduous woods to the left, and old field to the right.
Stream Pr-s002 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods in wetland Pr-w004.
Stream Pr-s003 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and empties into wetland Pr- w004.
Stream Pr-s004 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and empties into wetland Pr- w005.
Stream Pr-s005 has a wide (>10m) riparian width to the left, and a narrow (<5m) riparian width to the right. The riparian corridor is comprised of deciduous woods to the left and an agricultural field to the right.
Stream Pr-s006 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w011 which is in a deciduous woodlot.

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Geauga County 138kV Transmission Line Project

Table 4

	Narrative Description		ŀ	l	1	I	I	
		ΥN	¥ N	A N	V Z	A N	N A	K Z
	Tangth (Incl) within (In- bot Corridor	63	ŝ	65	19	92	102	61
	Length (feet) within 200- foot Corridor	251	240	245	6	244	278	210
nule	Makimum Pool Depth (centimeters)	4	F	Q	Q	4	ε	4
Ind.Strenth	Tankini Wuli (Ceol)	e	N	4	сл	N	4	4
Table 4. Decaded Stream Table	Raine	Perennial	Intermittent	Perennial	Perennial	Perennial	Perennial	Perennial
	A CONTRACT OF	Stream Pr-s007 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w012 which is in a deciduous woodlot.	Stream Pr-s008 has a wide (>10m) riparian width on both sides. The stream flows between wetlands Pr-w014 and Pr-w015, and through Pr-w017. The stream is surrounded by scrub shrub vegetation.	Stream Pr-s009 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s009b has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and into Pr-s009.	Stream Pr-s010 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w019 which is in a deciduous woodlot.	Stream Pr-s011 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w022 which is in a deciduous woodlot.	Stream Pr-s012 has a moderate (5-10m) riparian width on both sides. The stream flows through wetland Pr-w023 which is in a deciduous woodlot.
		Pr-s007	Pr-s008	Pr-s009	-jd -jd	Pr-s010	Pr-s011	Pr-s012

Geauga County 138kV Transmission Line Project

Table 4

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	A REAL PROPERTY OF	1	1	1	1	ł	1	I
	QHEI Sture	۲ ۲	A N	V V V	Y Z	¥ Z	NA	۸A
	Longh (col) Fuln 19- fon	88	78	62	72	SS	64	89
	Langeh (faet) withig 300- font Corridor	163	271	564	237	266	214	220
Table	Maximum Pool Depuis (centimeters)	4	15	20	12	20	15	7
Red Stoam	Bankrut Mida (faet)	4	7	10	5	10	7	10
Table 4. Detailed Stream Table	riow Regime	Perennial	Perennial	Perennial	Perennial	Perennial	Perennial	Perennial
	Stream Description	Stream Pr-s013 has a moderate (5-10m) riparian width on both sides. The stream flows out of a pond and through wetland Pr-w024 which is in a deciduous woodlot.	Stream Pr-s014 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w028 which is in a deciduous woodlot.	Stream Pr-s015 has a wide (>10m) riparian width on both sides. The stream flows through wetlands Pr-w029 and Pr-s030 which are in a deciduous woodlot.	Stream Pr-s016 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w034, and flows through old field and scrub shrub vegetation communities.	Stream Pr-s017 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w035 which is in a bottom land forest community.	Stream Pr-s018 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w035 which is in a bottom land forest community.	Stream Pr-s019 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w036 which is in a deciduous
	a and a second	Pr-s013	Pr-s014	Pr-s015	Pr-s016	Pr-s017	Pr-s018	Pr-s019

September 2007 ATSI & CEI 14946398

Table 4

				I			
	Narrative		1	1	1	I	I
	oue Swit		A N	A N	A N	NA	∢ Z
	synthis ad- how		60	63	ß	8	B
	I tength (feit) within 200- floot Corrular		200	226	207	202	500
The	Maximum Pool Depth (centinoters)		4	2	ষ	ω	4
	Bankini Widh Geo		ω	11	7	ω	â
Table 2. Detailed Stream Table	Plow		Perennial	Perennial	Perennial	Perennial	Perennial
	Stream Discription	woodlot.	Stream Pr-s020 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s021 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s022 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w038 which is in a deciduous woodlot.	Stream Pr-s023 has a narrow (<5m) riparian width on both sides. The stream flows through residential pasture, deciduous forest, and agricultural vegetation communities. The stream also flows through wetland Pr-w040 before crossing under Sun Road.	Stream Pr-s024 has a narrow (<5m) riparian width on both sides. The stream flows through deciduous forest and scrub shrub vegetation communities. The stream also flows through wetland Pr-w040 before crossing under Sun Road, and then through wetland Pr-w042.
	(dent/her		Pr-s020	Pr-s021	Pr-s022	Pr-s023	Pr-s024

Geauga County 138kV Transmission Line Project

Table 4

	Table 4. Delated Stream Table	Ced Stream	Tinte Bartine Bartine				Turbing Pr Panara pa Panara pa Panara pa Panara pa
Stream Description	Line Bran	And the second s	Maximum Pool Depth (centimeters)	Length Could Turing 200 For Counding	Langth (feel) within 60- foot Corridor	Ottel	Namative Deserption
Stream Pr-s025 has a narrow (<5m) riparian width on both sides. The stream flows between a deciduous woodlot and an agricultural field.	Intermittent	ດ	7	128	58	NA	j
Stream Pr-s026 has a wide (>10m) riparian width on both sides. The stream flows through the deciduous woods.	Ephemeral	16	٥	227	63	NA	I
Stream Pr-s027 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and into Pr-s028.	Perennial	8	11	330	87	NA	I
Stream Pr-s028 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w049 which is in deciduous woods.	Perennial	10	18	345	172	NA	I
Stream Pr-s029 flows along side U.S. 6 and has no riparian width.	Perennial	5	B	1015	60	NA	1
Stream Pr-s030 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w050 in deciduous woods.	Perennial	13		229	69	59	Good warmwater habitat
Stream Pr-s031 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w050 in deciduous woods and eventually connects with stream Prs-032.	Ephemeral	2	0	280	86	N N	I
Stream Pr-s031 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and eventually connects with stream Prs-031.	Perennial	~	10	249	62	A N	ļ

Table 4

September 2007 ATSI & CEI 14946398

			<u> </u>				
Naturation Description	1	Good warmwater		'	1	1	I
	۸A	28	۲ ۲	A N	A N	AN	۲ ۲
Langth Check	62 62	62	60	89	252	75	ŝ
Leven (level) Millio 200	205	290	202	229	406	228	119
Able Malimum Pool Benth	0	•	0	ω	0	m	e
Markan Stream	-	10	N	9	~	CN	N
Tatility & Defailed Stream Table Trion Defailed Man	Ephemeral	Perennial	Ephemeral	Perennial	Ephemeral	Perennial	Perennial
	Stream Pr-s033 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w053 in deciduous woods.	Stream Pr-s034 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w054 in deciduous woods.	Stream Pr-s035 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w058 in scrub shrub vegetation and also through deciduous woods.	Stream Pr-s036 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w059 in deciduous woods.	Stream Pr-s037 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w059 in deciduous woods.	Stream Pr-s038 has a wide (>10m) riparian width on the left side, and a narrow (<5m) riparian width on the right side. The stream flows through wetland Pr-w060 in deciduous woods.	Stream Pr-s038b has a wide (>10m) riparian width on the left side, and a narrow (<5m) on the right side. The stream flows into stream Pr-s038 while passing through wetland Pr-w080 in deciduous woods.
	Pr-s033	Pr-s034	Pr-s035	Pr-s036	Pr-s037	Pr-s038	Pr- s038b

Geauga County 138kV Transmission Line Project



Natratific Description		ļ	I	ł	I		I
	R N	A N	A N	V Z	A N	55	¥ Z
Length (teen vitility of-	60	179	534	60	19	116	70
Laught (hel) within 200-	290	427	971	203	201	308	279
(Table Maximum Pool Depth Iccudinciess	5	o	Q F	2	10	1	4
Real Stream	ۍ م	N	11	4	7	13	4
Table 4. Detailed Stream Table Refute Bankfull Maa Refute Nidda Fool	Intermittent	Ephemeral	Perennial	Perennial	Perennial	Perennial	Perennial
A Contract of the second s	Stream Pr-s039 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w060 in deciduous woods.	Stream Pr-s040 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w063 in deciduous woods.	Stream Pr-s041 has no riparian corridor on both sides. The stream flows through residential pasture, wetland Pr-w066, and deciduous woods.	Stream Pr-s042 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w067 in scrub shrub vegetation.	Stream Pr-s043 has a wide (>10m) riparian width on both sides. The stream flows through recently clear cut woods, and the vegetation is now scrub shrub.	Stream Pr-s044 has a wide (>10m) riparian width on both sides. The stream flows through scrub shrub vegetation, deciduous woods, and wetland Pr-w073.	Stream Pr-s045 has a wide (>10m) riparian width on both sides. The stream flows through wetland Pr-w078 in deciduous woods.
and the second	Pr-s039	Pr-s040	Pr-s041	Pr-s042	Pr-s043	Pr-s044	Pr-s045

Geauga County 138kV Transmission Line Project

Table 4

September 2007 ATSI & CEI 14946398

	An							
	Narralive Description	1	1	1	Fair warmwater habitat		Good warmwater habitat	I
	ORD Seore	NA	NA	ΝA	43	ΝA	61	A N
	Teaugia (nea) within 60 Taol Corridor	120	125	85	74	0	60	82
	Length (feet) n fillin 200. foot: Connoise	550	629	230	243	47	235	107
(Tanto	Maximum Puol Depth (centinisters)	6	10	10		0	L	25
lied Stream	Rankfur Frankfur Frankf	8	ო	2	13	16	13	16 1
Table 4. Detailed Stream Table	Flow	Perennial	Perennial	Perennial	Perennial	Ephemeral	Perennial	Perennial
	Stream Description <sup>2</sup>	Stream Pr-s046 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and eventually forks into two branches.	Stream Pr-s047 has a wide (>10m) riparian width on both sides. The stream flows through scrub shrub vegetation, deciduous woods, and wetland Pr-w084.	Stream Pr-s048 has a wide (>10m) riparian width on both sides. The stream flows through old field vegetation, deciduous woods, and wetland Pr-w085.	Stream Pr-s049 has a narrow (<5m) riparian width on both sides. The stream flows through wetland Pr-w089 in deciduous woods.	Stream Pr-s050 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s051 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s052 has a wide (>10m) riparian width on both sides. The stream flows out of wetland Pr-w091 and into Pr-s051 in deciduous woods.
		Pr-s046	Pr-s047	Pr-s048	Pr-s049	Pr-s050	Pr-s051	Pr-s052

Geauga County 138kV Transmission Line Project

Table 4

September 2007 ATSI & CEI 14946398



	Narrathe Description	Good warmwater habitat	Good warmwater habitat	I	I	Good warmwater habitat	I	1	1
	QHRI Score	61	64	NA	ΝA	64.5	NA	NA	A N
	Length (1644) foot for Correlate	122	143	64	65	74	60	65	85
	Length (feet) within 200 Foot Corridor	313	342	626	370	444	200	210	350
i Table	Naximum Pool Depth (centimeters)	·	•	ъ	15	ı	0	0	o
ntal Sintau	Runni Nami (teo)	13	13	ষ	Ø	23	16	2	ო
Tabe 4. Delaiki Streami rabia	Elow E Regime	Perennial	Perennial	Perennial	Perennial	Perennial	Intermittent	Ephemeral	Ephemeral
	Stream Description	Stream Pr-s053 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s054 has a wide (>10m) riparian width on both sides. The stream flows through scrub shrub vegetation, recreational pasture, and wetland Pr-w094.	Stream Pr-s055 has a wide (>10m) riparian width on both sides. The stream flows through scrub shrub vegetation, deciduous woods, wetland Pr-w096, and wetland Pr-w097.	Stream Pr-s056 has a wide (>10m) riparian width on both sides. The stream flows through scrub shrub vegetation and deciduous woods.	Stream Pr-s057 has a wide (>10m) riparian width on both sides. The stream flows through deciduous woods and scrub shrub vegetation.	Stream Pr-s058 has a moderate (5-10m) riparian width on both sides. The stream flows through deciduous woods.	Stream Pr-s059 has a wide riparian width on both sides. The stream flows between a corn field to the left and an old field to the right.	Stream Pr-s060 has a moderate riparian width
		Pr-s053	Pr-s054	Pr-s055	Pr-s056	Pr-s057	Pr-s058	Pr-s059	Pr-s060

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Geauga County 138kV Transmission Line Project

Table 4

September 2007 ATSI & CEI 14946398

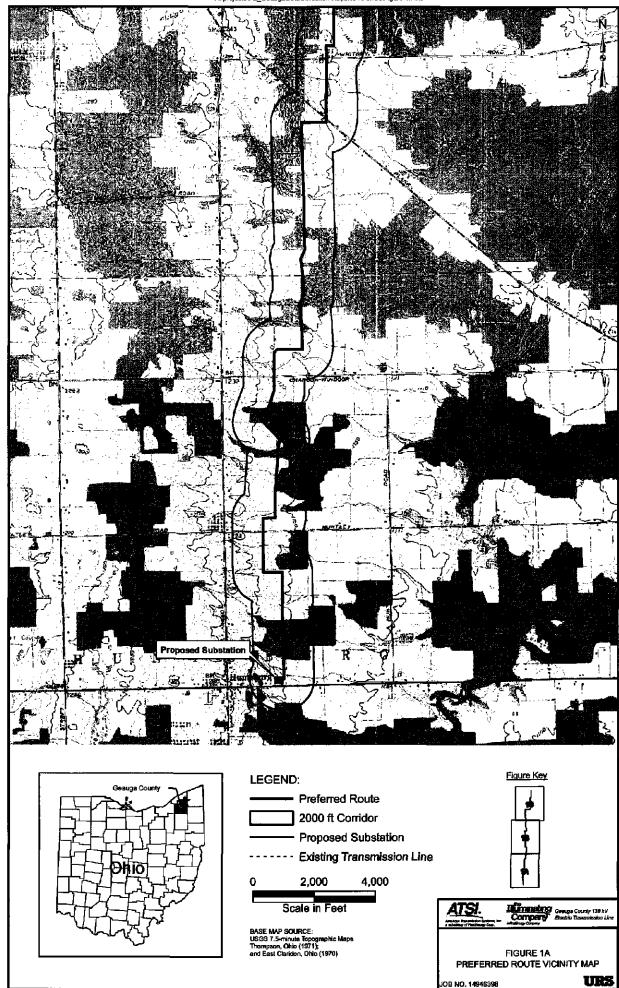


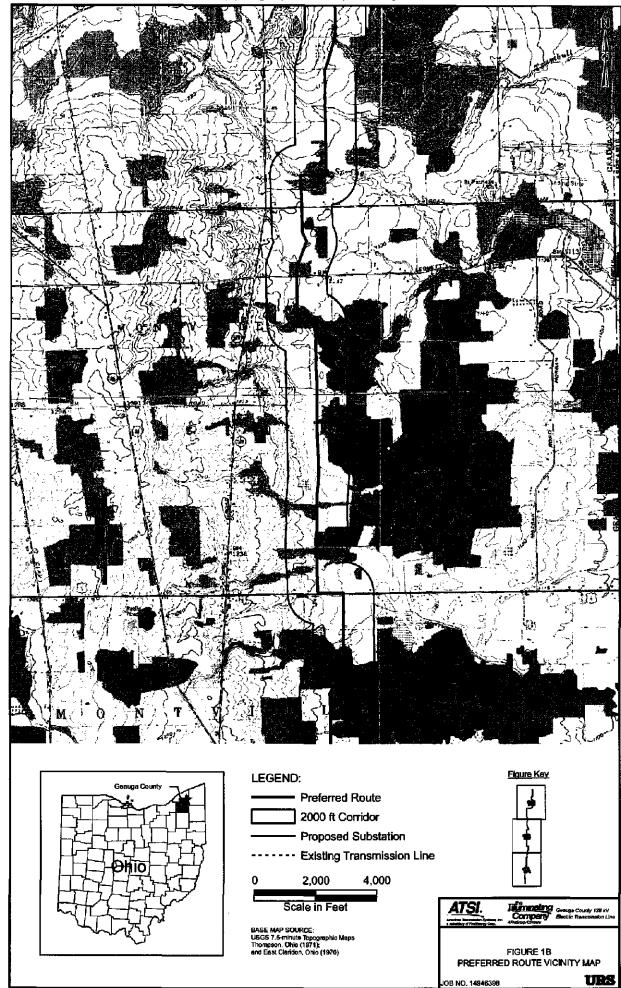
Steams described as river left and right as looking downstream.

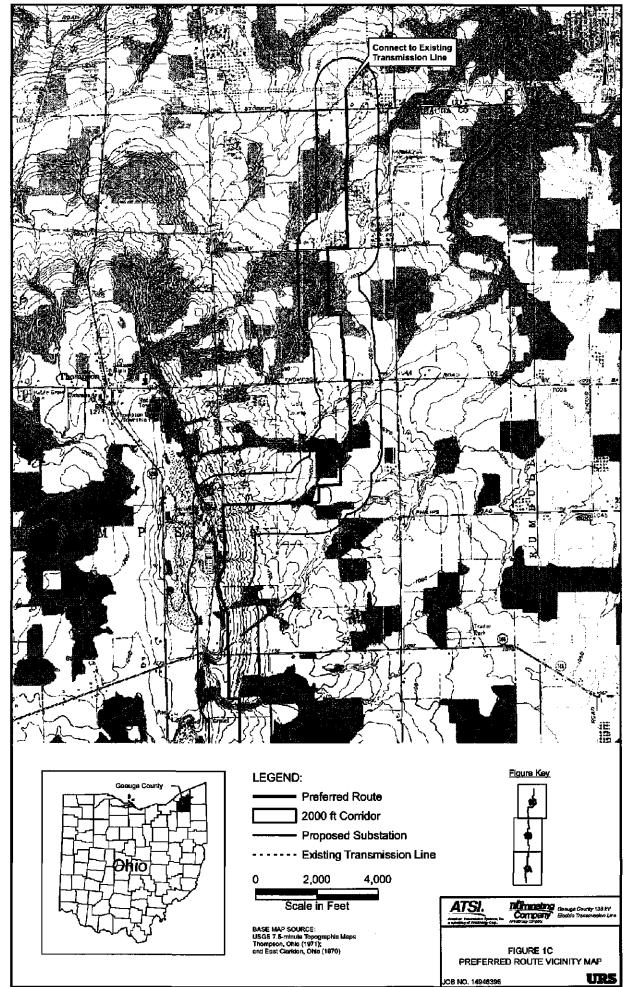
Geauga County 138kV Transmission Line Project

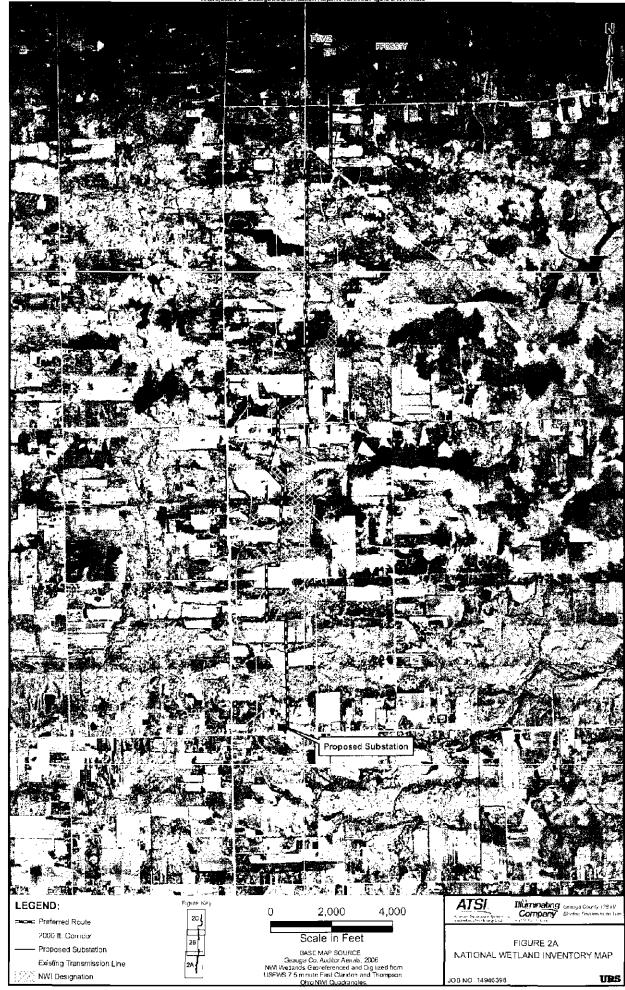


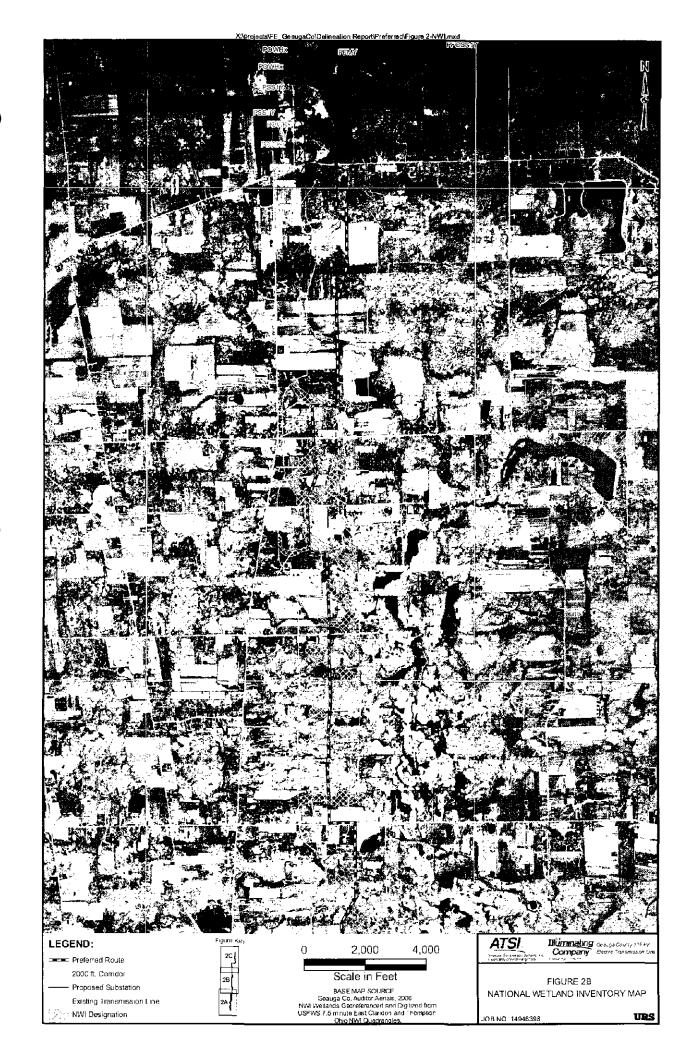


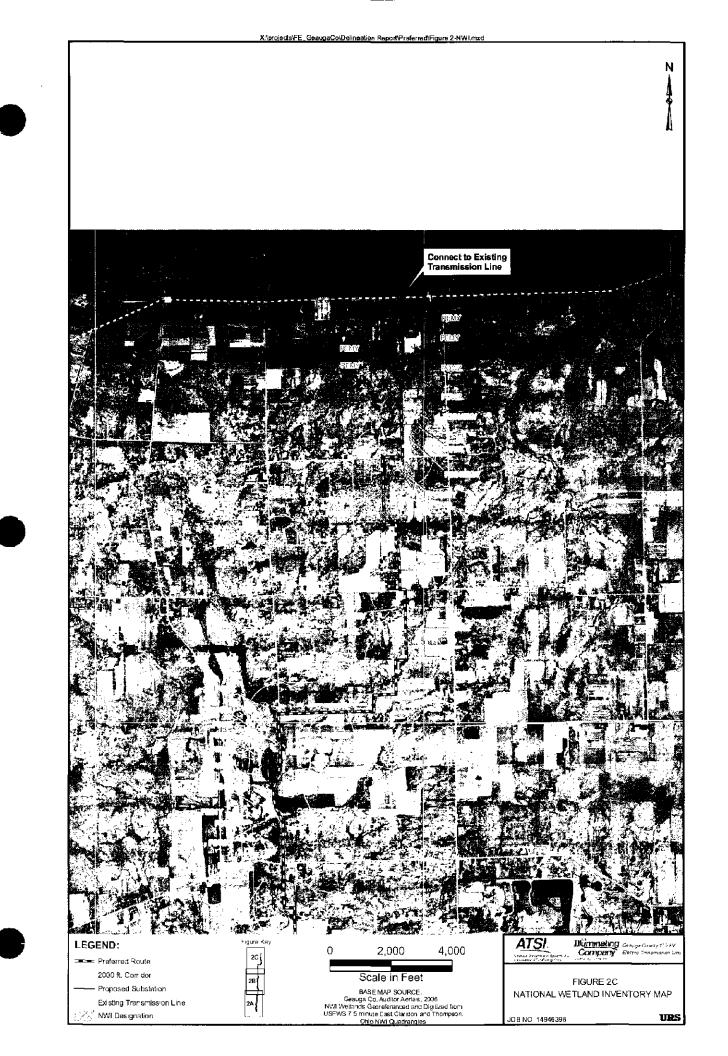


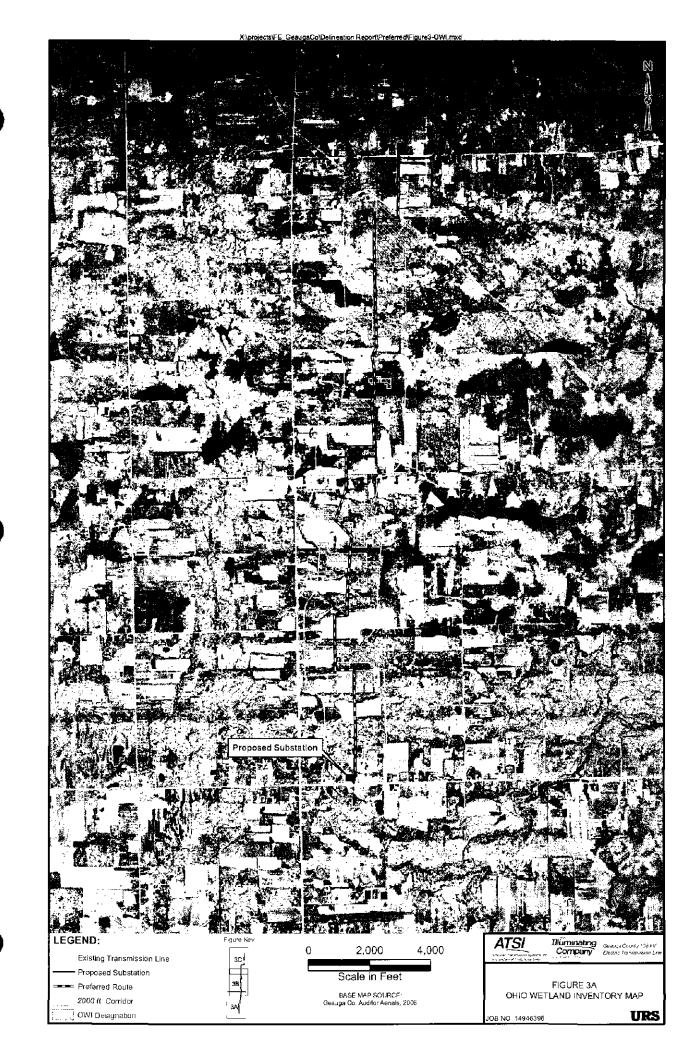








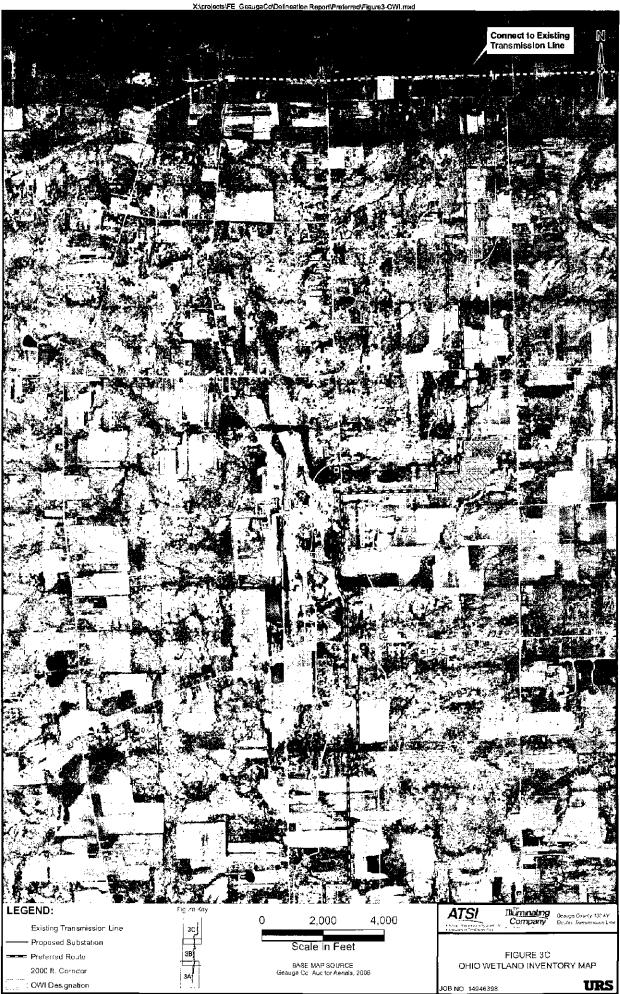


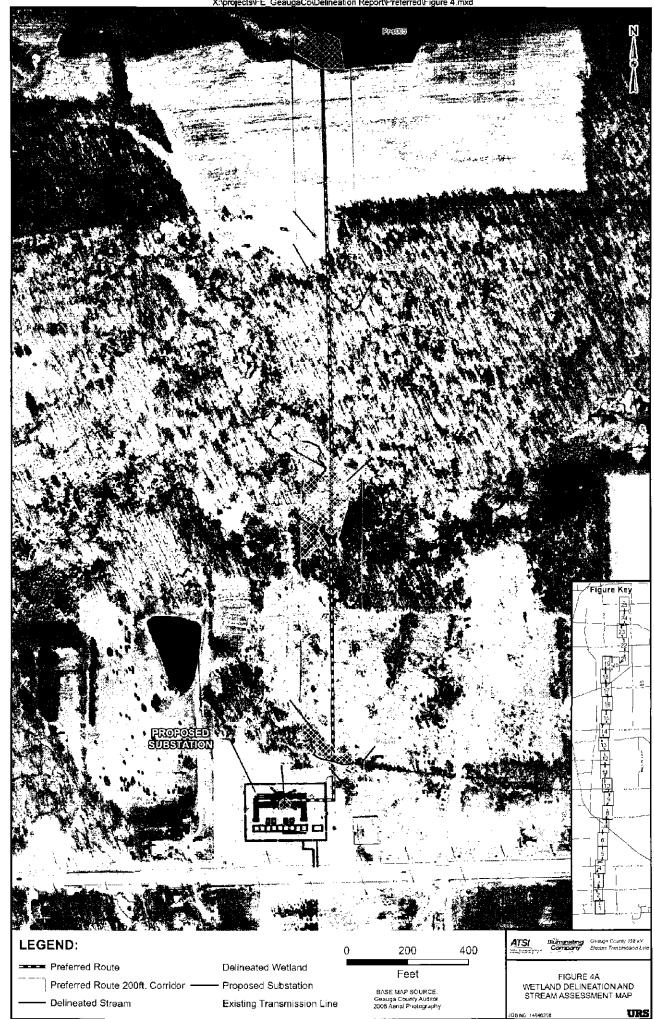


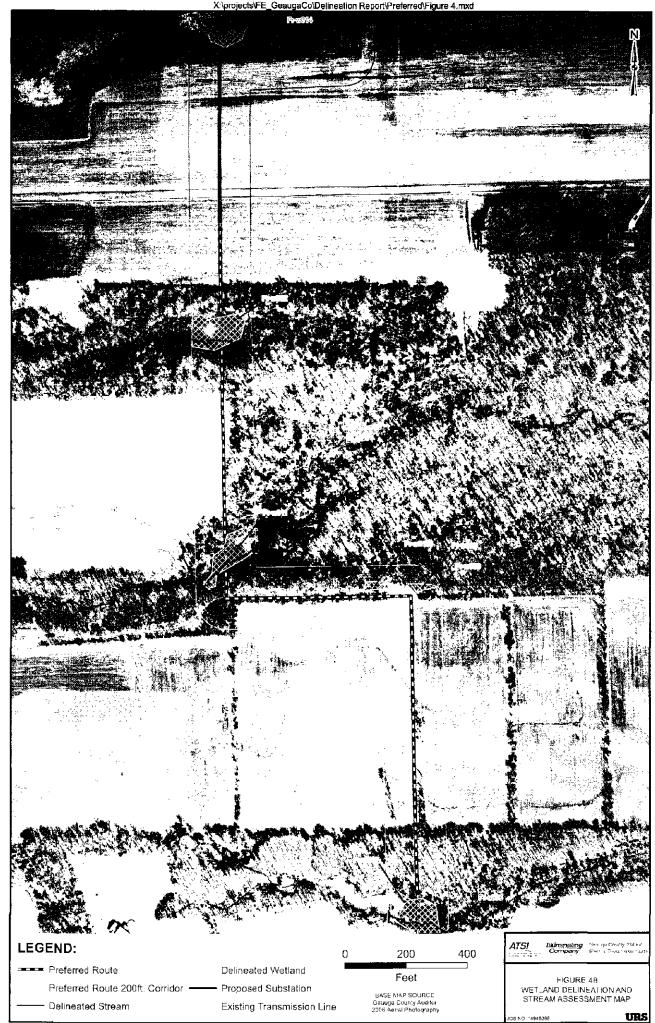


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Existing Transmission Line	36	0	2,000	4.000	ALSI An and The second polymer for An analysis (Card Second Sec	Company	Зевица Ссиліу 138 к Еївсіло напатіяног
Proposed Substation	38 <sup>1</sup>		Scale in Feet			FIGURE 3B	
Preferred Route 2000 ft. Corridor	34	Ger	BASE MAP SOURCE: a.gs Co. Auditor Aenals,		QHIO WET	LAND INVENT	ORY MAP
OWI Designation			-		JOB NO. 14946396		UR



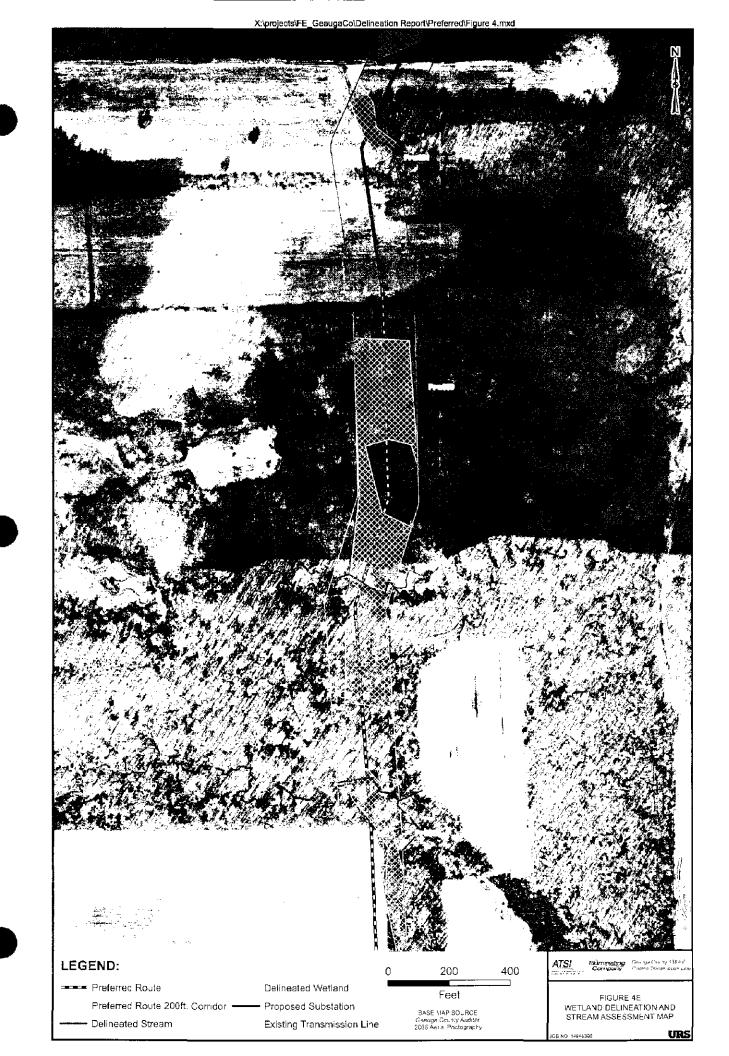






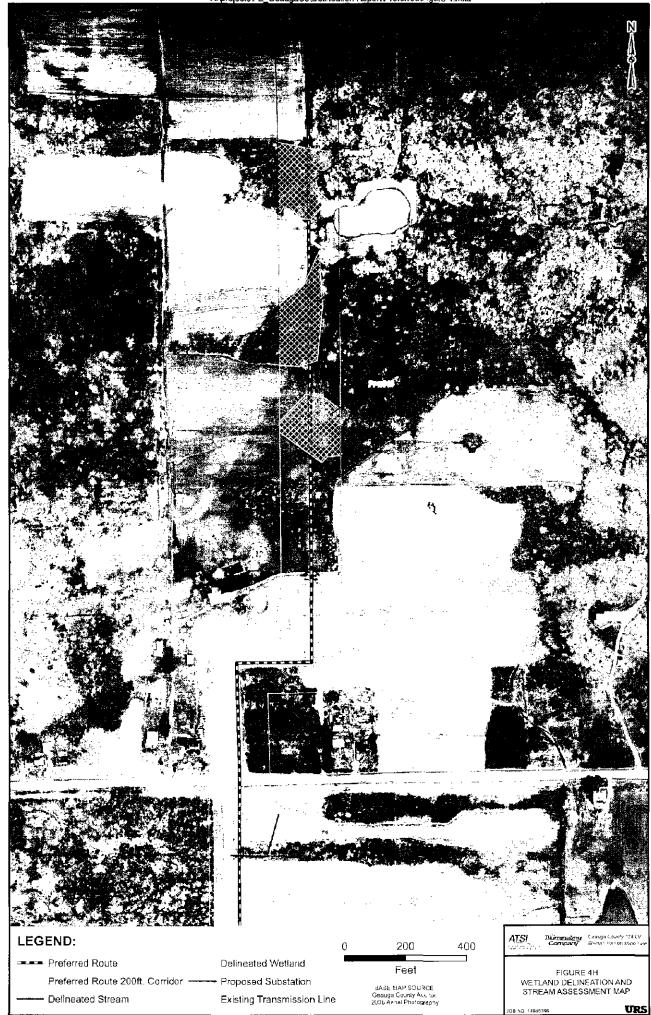


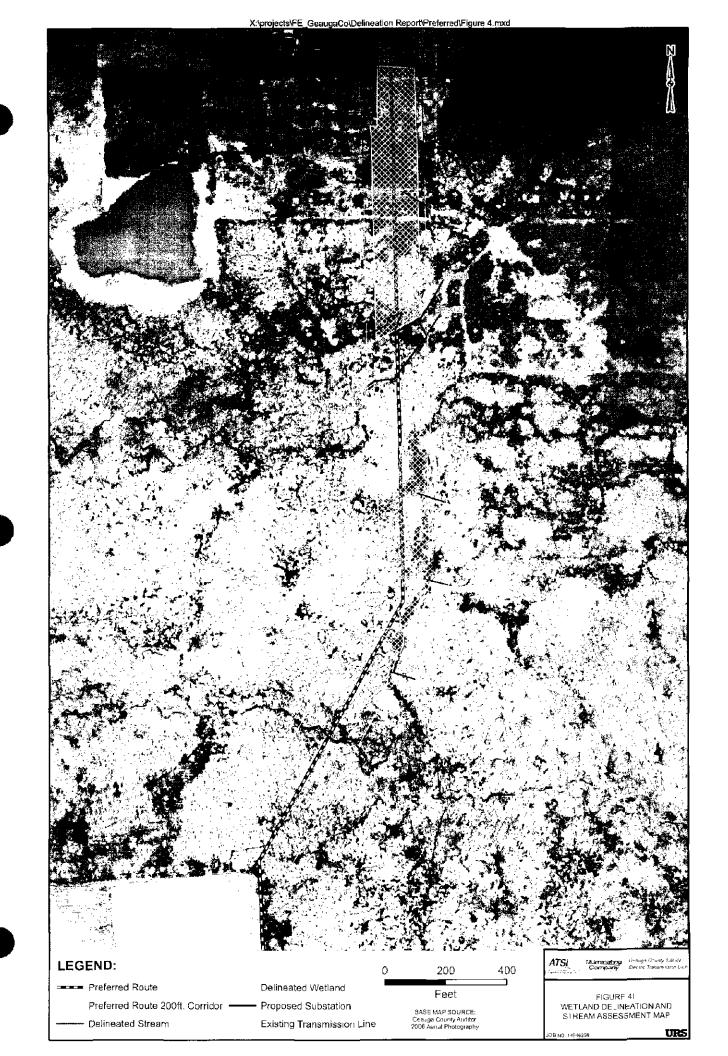
















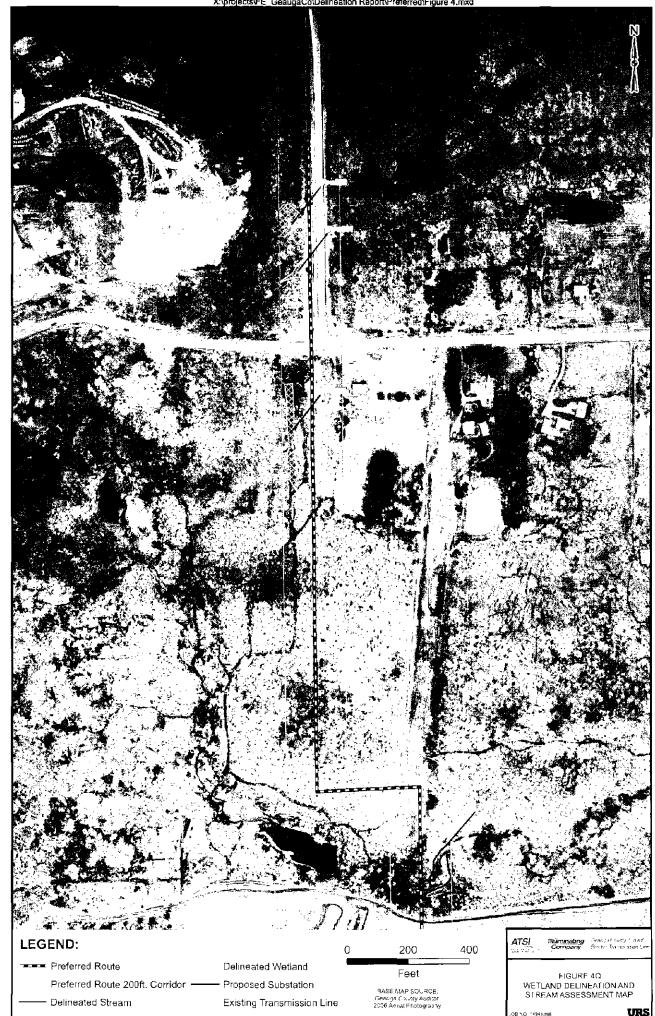


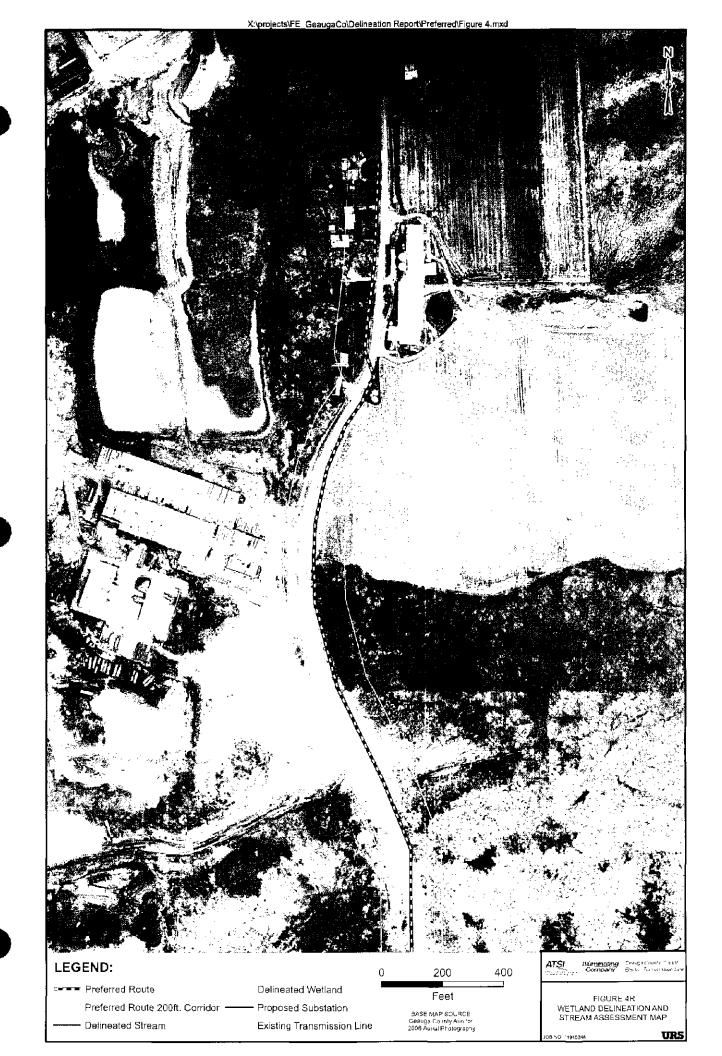




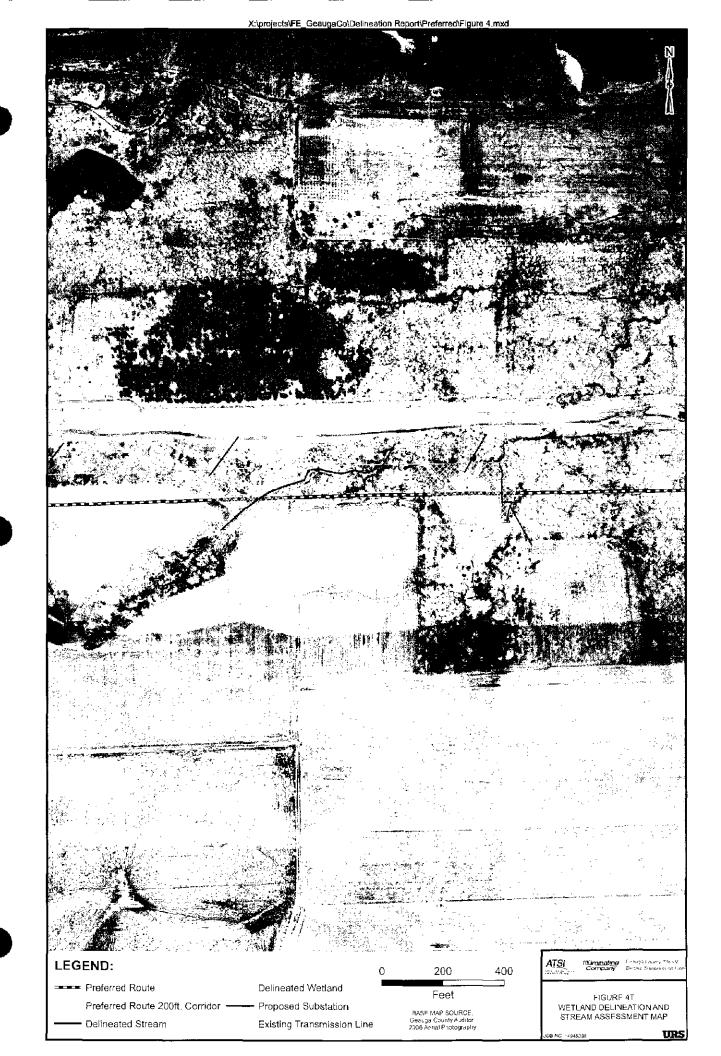










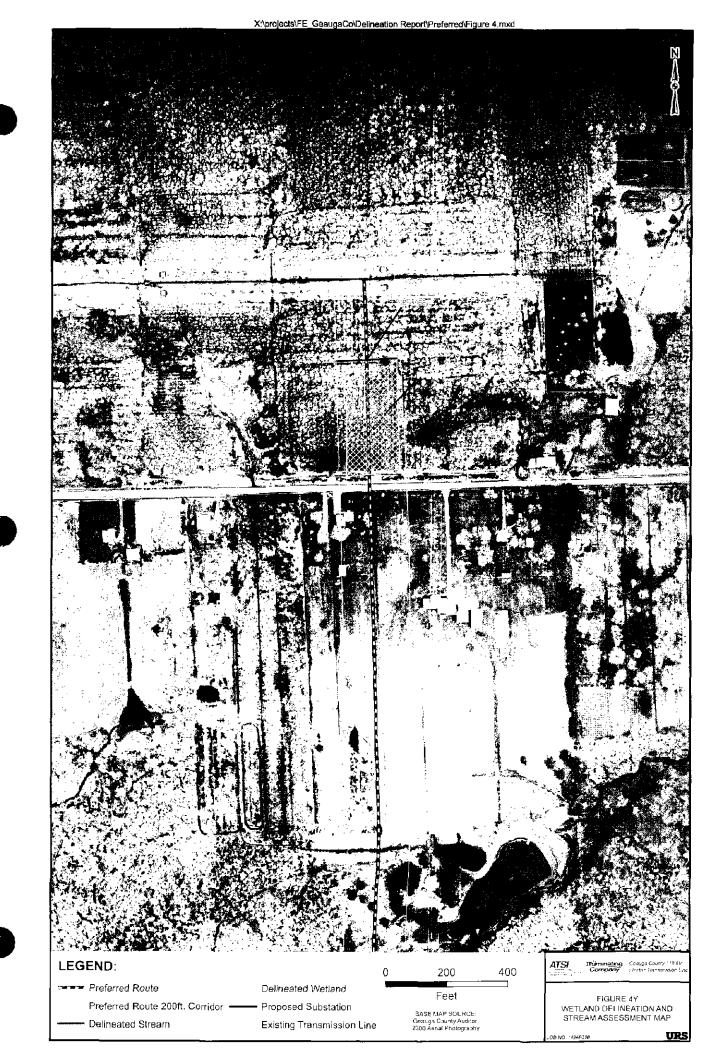


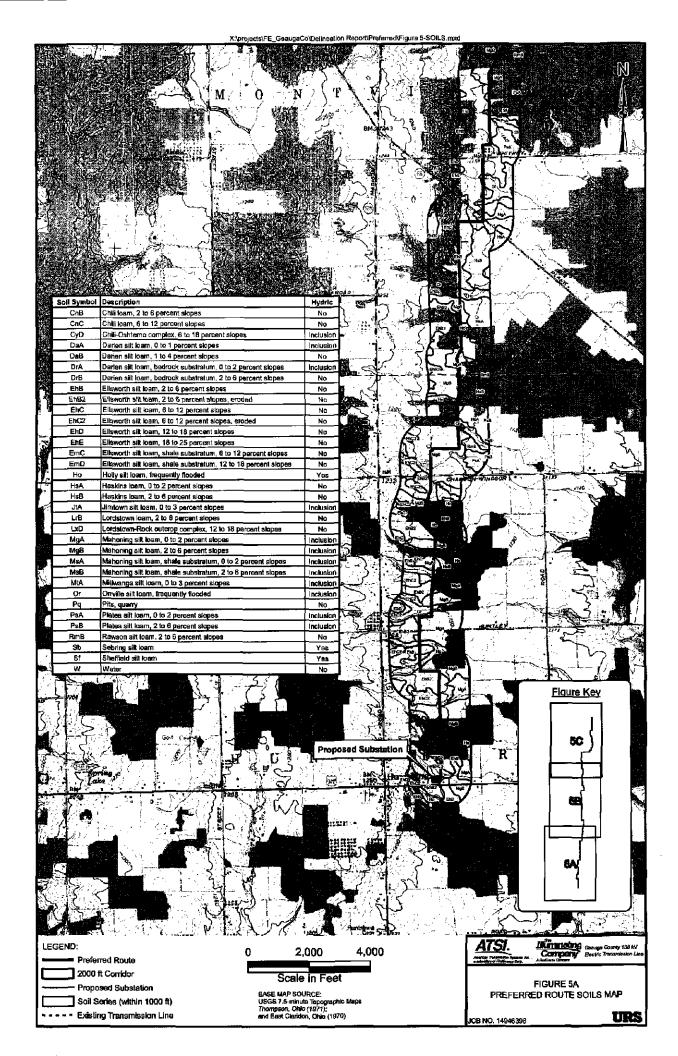






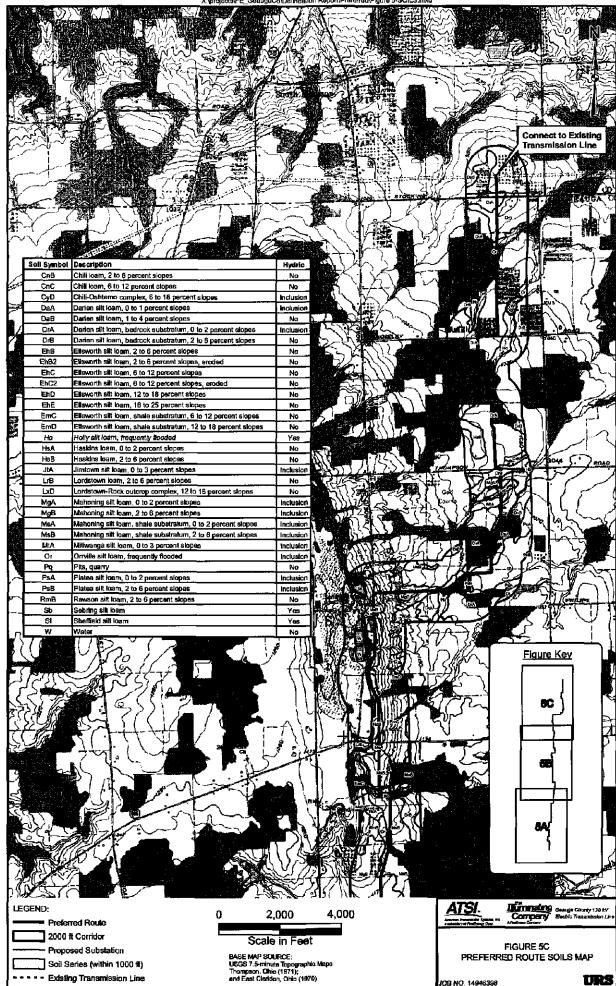






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Onlikern 2 bit generet stopen       10         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen         11 bit generet stopen       10 bit generet stopen         12 bit generet stopen       10 bit generet stopen       10	2. / 🦉	SSSC 72 NY 14		
Onlikern 2 bit generet stopen       10         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen       10 bit generet stopen         Origin 2016       10 bit generet stopen         11 bit generet stopen       10 bit generet stopen         12 bit generet stopen       10 bit generet stopen       10				- 1-277
CRIMING       Different Board       Big Barrowski dages       No         CRC       Different Board       Big Barrowski dages       No         CRC       Different Board       Big Barrowski dages       No         Different Board       Big Barrowski dages       No       No       No         Different Board       Big Barrowski dages       No       No       No       No         Different Board       Big Barrowski dages       No       No <td>Sall Symbol</td> <td>all Description</td> <td>Huddin Die Aller and All</td> <td>a th</td>	Sall Symbol	all Description	Huddin Die Aller and All	a th
Internet     Deltarini (bit 2) provest dapen     No.       Drift     Deletaris (bits), Dis genorest dapen     No.       Dis Deletaris (bits), Dis Deletaris (bits), Dis g				1.1830
OC       Onf-On-Tarleting segment, if to if prevent singue       Instance         Deta       Detain all toom, it too prevent singue       No         O.D.       Other all toom, it too prevent singue       No         O.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D.       Detain all toom, it too prevent singue       No         D.D	7			A 6- 8
Before         Determ all born, 10 0 genoral algons         National           Drift         Determ all born, 10 0 genoral algons         National         Nat				
Bit Demon all locar, 1.10 4 generant algoes       No.         Ori/ Datam all locar, below destatian, 0.10 2 generant tages       No.         Bit Bit Demon all locar, 1.00 all generant tages       No.         Bit Bit Demon all locar, 2.00 all generant tages       No.         Bit Demon all locar, 2.00 all generant tages       No.         Bit Demon all locar, 2.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demon all locar, 1.00 all generant tages       No.         Bit Demont all locar, 1.00 all generant tages       No.         Bit Demont all locar, 1.00 all generant tages       No.         Bit Demont all locar, 1.00 all generant tages       No.         Bit Demont all locar, 1.00 all generant tages       No.         Bit Demont all locar, 1.00 all generant tages       No.         Bit Demont all locar, 1.00				
Internet         Dates of tools, bestock substratum, 10 b 2 general topes         Tealson           Internet         Balanceth SB, beng Zong Zongen Lobos         No           Internet         Balanceth SB, beng Zonge				
OD:       Define all turn, beliefed substraturn, 2: 10 # percent stopes       No         DB:       Elsevent all burn, 2: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 10 # percent stopes       No         DD:       Define all burn, 10: 2 # percent stopes       No         DD:       Define all burn, 10: 2 # percent stopes       No         DD:       Define all burn, 10: 2 # percent stopes       No         DD:       Define all burn, 10: 2 # percent stopes       No				
BR0       Binecrit Bill Born, 210 B procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No         BR0       Binecrit Bill Born, 201 D procett stopen       No <td< td=""><td></td><td></td><td></td><td>1</td></td<>				1
BROD:       Benedit all Bane, 16: 10: 2 percent depenanted       No.         BRO:       Benedit all Bane, 16: 10: 2 percent depenanted       No.         BRO:       Benedit all Bane, 16: 10: 2 percent depenanted       No.         BRO:       Benedit all Bane, 16: 10: 2 percent depenanted       No.         BRO:       Benedit all Bane, 16: 10: 2 percent depenanted       No.         BRO:       Benedit all Bane, 16: 10: 2 percent depenanted       No.         BRO:       Benedit all Bane, 16: 10: 10: 10: 10: 10: 10: 10: 10: 10: 10				<u><u></u></u>
BDC       Bitworth all Bunn, 10: 10: 10 procent stopen       Ho         BDC       Discorth all Bunn, 10: 10 for procent stopen       Ho         BER       Discorth all Bunn, 10: 10 for procent stopen       Ho         End       Discorth all Bunn, 10: 10 for procent stopen       Ho         End       Discorth all Bunn, 10: 10 for procent stopen       Ho         End       Discorth all Bunn, 10: 10 for procent stopen       Ho         End       Discorth all Bunn, 10: 20 for procent stopen       Ho         Find       Discorth all Bunn, 10: 20 for procent stopen       Ho         HoA       Holden Bunn, 10: 20 procent stopen       Ho         HoA       Holden Bunn, 20: 20 procent stopen       Ho         HoA       Holden Dun, 20: 20 procent stopen       Ho         Ho       Holden Dun, 20: 20 procent stopen       Ho         Ho       Ho       Ho       Ho         Ho       Ho       Ho       Ho         Ho       Ho       Ho       Ho <td></td> <td></td> <td></td> <td>Series.</td>				Series.
ERC:       Elevent rail som, 5 to 12 parcent stopes       Ho         ERC:       Elevent rail som, 16 to 24 parcent stopes       Ho         End:       Elevent rail som, 16 to 24 parcent stopes       Ho         End:       Elevent rail som, 16 to 24 parcent stopes       Ho         End:       Elevent rail som, 16 to 24 parcent stopes       Ho         End:       Elevent rail som, 16 to 24 parcent stopes       Ho         End:       Elevent rail som, 16 to 24 parcent stopes       Ho         Inf:       Inf: Inf: Inf: Inf: Inf: Inf: Inf: Inf:				
BCD       Etheredin all boxes, 12:0:18 general stopes       No.         Efficie       Etheredinations, Nutrie subpresent 6:0:2 general stopes       No.         Emcl       Etheredinations, Nutrie subpresent 6:0:2 general stopes       No.         Find       Etheredinations, Nutrie subpresent 6:0:2 general stopes       No.         Find       Etheredinations, Nutrie subpresent 4:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0				
ERE       Electronical solutional, solutional, foi la general				
ERC       Bivecond all Sum, Auke substratum, 10 to 19 procent alogne.       Model         FmC       Bivecond all Sum, Auke substratum, 20 to 19 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         LDD       Jong Haam, 20 to 2 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         LDD       Jong Haam, 20 to 2 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         LDD       Jong Haam, 20 to 2 procent alogne.       No.         HAA       Herican Sum, Chu 22 procent alogne.       No.         HAA       Heric				
Import Different Result       12 to 16 percent stops       10         190       Hold Advises Name, 0.0.2 percent stops       100         100       Hold Advises Name, 0.0.2 percent stops       100         100       Hold Advises Name, 0.0.2 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         100       Londonave Reservation       12 to 16 percent stops       100         101       Londonave Reservation       100       100       100         101       Londonave Reservation       100       100       100       100         101       Londonave Reservation       100       100       100				```
Hind       Hold				
Hale       Harkins team 0 to 2 percent stopes       No         Hale       Harkins team 0 to 2 percent stopes       No         Lid       Annown all kerns 0 to 2 percent stopes       No         Lid       Didnown all kerns 0 to 2 percent stopes       No         Lid       Didnown all kerns 0 to 2 percent stopes       No         Lid       Didnown all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Mod       Mean mage all kerns 0 to 2 percent stopes       No         Past Paska all kerns 2 to 2 percent stopes       No       No         Stop stopes       Mode stopes       No       No         Stop stopes       Mode stopes       No       No         Stop stopes       Mode stopes       No       No         Stop stopes <td></td> <td></td> <td></td> <td><b>FAI</b></td>				<b>FAI</b>
Hill Halling Kann, 20:0 Sprecet stopes       Ho         LD       Lot Confident News, 00:0 Sprecet stopes       No         MA       Minning all Barn, 00:2 Sprecet stopes       No         MA       Minning all Barn, 20:0 Sprecet stopes       Instantion         Co       Origin all Barn, 20:0 Sprecet stopes       Instantion         Sol Service all Barn       O       Sprecet stopes       Instantion         Sol Service all Barn       O       Sprecet stopes       Instantion         Sol Service all Barn       O       Sprecet s				
UM       Jintom site, So 2 general stops:       including         UD       Unitations Hom, 2 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         MSA       Maximg all bom, 3 to 5 penetist stops:       including         PAA       Penetist stops:       including       including         Storing wit box:       S penetist stops:       including       includin				
LD         Unreference Manual 20 6 percent alorge         No           LD         Attentions Reck androg complex, 12 to 8 percent alopes         Including           MgA         Manuring all Koam, Die 2 parcent alopes         Including           MgA         Manuring all Koam, Die 2 parcent alopes         Including           MgA         Manuring all Koam, Die 2 parcent alopes         Including           MgA         Manuring all Koam, Alle substrum, 2 to 8 percent alopes         Including           MgA         Manuring all Koam, Alle substrum, 2 to 8 percent alopes         Including           MgA         Manuring all Koam, Alle substrum, 2 to 8 percent alopes         Including           MgA         Manuring all Koam, Alle substrum, 2 to 8 percent alopes         Including           MgA         Manuring all Koam, 2 to 8 percent alopes         Including           Piel Pela Pielas all Koan, 2 to 8 percent alopes         Including         Including           Piela Pielas all Koan, 2 to 8 percent alopes         Including         Including           Startifier all toom         V         V         V				
Sector       Sector       0       2,000       4,000         Sector       Sector       Sector       0       2,000       4,000         Sector       Social Substation       0       2,000       4,000       Social Substation         Social Substation       Social Substation       0       2,000       4,000       Social Substation         Social Substation       Social Substation       Social Substation       Social Substation       Social Substation       Social Substation         Social Substation       Social Substation       Social Substation       Social Substation       Social Substation       Social Substation         Social Substation       Social Substation       Social Substation       Social Substation       Social Substation				
Main         Interesting at Beam, Dio 2 parent stopes         Inclusion           MBA         Matering at Beam, and a substraturi. 2 to 2 parent stopes         Inclusion           MBA         Matering at Beam, and a substraturi. 2 to 2 parent stopes         Inclusion           MBA         Matering at Beam, and a substraturi. 2 to 2 parent stopes         Inclusion           O         Oriele at Itan, Tiquently Rockel         Inclusion           O         Oriele at Itan, Tiquently Rockel         Inclusion           PA         Plane at Itan, Tiquently Rockel         Inclusion           PA         Plane at Itan, Tiquently Rockel         Inclusion           PA         Plane at Itan, Tiquently Rockel         Inclusion           Watter         No         No           Staffield at loan, 2 to 2 parent stopes         Inclusion           Watter         No         No           Staffield at loan         No         No           Staffield Pinered Route         O         2,0				Č.
Main       Main Christing all location, all close parcent slopes       Inclusion         MAA       Makeining all location, all close parcent slopes       Inclusion         MAA       Makeining all location, all close parcent slopes       Inclusion         MAA       Makeining all location, all close parcent slopes       Inclusion         MAA       Makeining all location, all close parcent slopes       Inclusion         PAA       Pilaus all location, 2 to 5 parcent slopes       Inclusion         PAA       Pilaus all location, 2 to 5 parcent slopes       Inclusion         Notice       Notice       Notice       Notice         Storting all location, 2 to 5 parcent slopes       Inclusion       Yes         Yes       Palae all location, 2 to 5 parcent slopes       Inclusion         Notice       Notice       Yes         Storting all location, 2 to 5 parcent slopes       Inclusion         Yes       Yes       Yes         Storting all location       Yes         Store location       Storting all location				1.1
MA       Methering all burn, ratie addraftiom. 2 to 3 percent slopes       inclusion         MAB       Methering all burn, ratie addraftiom. 2 to 3 percent slopes       inclusion         MA       Methering all burn, ratie addraftiom. 2 to 3 percent slopes       inclusion         Chorde all barn, ratio address       inclusion         PA       Pise, query       inclusion         PA       Pise, query       inclusion         PA       Pise percent slopes       inclusion         No       Orage all barn, ratio of percent slopes       inclusion         No       Orage all barn, ratio of percent slopes       inclusion         No       No       No       No         Statistical all barn       No       No       No         Statistical all barn       No       No       No         No       No       No       No       No         Statistical all barn       No       No       No       No         Statistical all barn       No       No       No       No       No         Statistical all barn       No       No       No       No       No       No         Statistical all barn       No       No       No       No       No       No       No				
MB       Inducing all loam, allos a prevent slopes       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         MtA       ItRenaga all loam, floguenty flocoid       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Pad.       Pulates all loam, floguenty flocoid       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Pad.       Pulates all loam, floguenty flocoid       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Pad.       Pulates all loam, floguenty flocoid       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Starting all loam       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Starting all loam       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Starting all loam       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Starting all loam       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Starting all loam       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes       Inclusion of the 3 prevent slopes         Starting all loam       Inclusion of the 3 prevent slopes				المستركم للجلسا
MA       Wearing all loam, 10 B 3 percent slopes       Inclusion         Ph.       Prints all loam, 10 2 percent slopes       Inclusion         PA       Prates all loam, 20 2 percent slopes       Inclusion         PB       Prates all loam, 20 2 percent slopes       Inclusion         Reading all loam       to 2 percent slopes       Inclusion         Reading all loam       to 2 percent slopes       Inclusion         Reading all loam       to 2 percent slopes       Inclusion         W Water       Via       Via         St       Shofffed all loam       Via         St       Shofffed all loam       Via         W Water       Via       Via         St       Shofffed all loam       Via         W Water       Via       Via         St       Shofffed all loam       Via         W Water       Via       Via         St       Shofffed all loam       Via         Moderna all load       Via       Via         W Water       Via       Via         Statistic       Via       Via         Moderna all load       Via       Via         Statistic       Via       Via         Statiston       Via				$\sim V$
Or       Ornelle all loam, fraquently flooded       Inclusion         Pad.       Pada aut Laam, 2 to 2 parcent slopes       Inclusion         Pad.       Pada aut Laam, 2 to 2 parcent slopes       Inclusion         Pad.       Pada aut Laam, 2 to 2 parcent slopes       Inclusion         Pad.       Pada aut Laam, 2 to 2 parcent slopes       Inclusion         Pad.       Pada aut Laam, 2 to 2 parcent slopes       Inclusion         Std       Soldneg all loam       10 autom       Vis         Std       Soldneg all loam       10 autom       Vis         W Wogar       Vis       Vis       Vis         W Wogar       Vis       Vis       Vis       Vis         Vis defined all box       Vis defined all box       Vis       Vis defined all box       Vis defined all box         Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box         Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box         Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       Vis defined all box       <	IMSD1			
PA       Pils. gury       No         PA       Plate all loam. 0 to 2 percent slopes       Inclusion         PA       Plate all loam. 2 to 5 percent slopes       No         Bb       Schering all kam.       Variation       No         W       Variation       Variation       No         W       Variation       No       No         Bb       Schering all kam.       Variation       No         W       Variation       No       No       No         Work       No       No       No       No         Bell       No       No       No       No         Scale       No       No       No       No         Scale       No       No       No       No         Scale       No		inducting of the and of the of percent of apoint		
PBB       Platea all toom. 2 to 5 percent stopes       Industrial         Rendb       Reven all toom. 2 to 5 percent stopes       No         Sto       Scherng all toom. 2 to 5 percent stopes       No         Sto       Scherng all toom. 2 to 5 percent stopes       No         W Watz       Value       Value         W Watz       Value       Value         W Watz       Value       Value         W Watz       Value       Value         Value       Value       Value         Va	MtA			
RrnB       Reveson sill loam, 2 to 8 percent stopes       No         36       Bodring all loam       Yes         w       Water       No         W       Water       No         GENDC:       Milestella station       Scale in Feel         Preferred Route       0       2,000       4,000         Scale in Feel       Scale in Feel       Figures Maps         Proposed Substation       Scale in Feel       Figures Maps         Scale in Feel       Preferred Route       Figures 58         Proposed Substation       Scale in Feel       Figures 100         Scale in Feel       Preferred Route Scale in Feel       Figures 58         Proposed Substation       Scale in Feel       Figures 58         Scale in Feel       Preferred Route Scale in Feel       Scale in Feel	MtA Or Pq	Orrville slit loam, fraquently flooded	Inclusion	
Storing ull toom       Yes         We der       Yes         We der       Figure Key         Gender       Figure Key         Gender       Gender         Jaseine Kaule       Gender         Science       Science         Science       Gender         Science       Science         Science       Sciene         Science<	MtA Or Pq PsA	Onville slit loam, fraquently flooded Pits, quany Ptatea siit loam, 0 to 2 percent stopes	Inclusion No Inclusion	R R
St Sheffield sitt leam       Yes         W dir       No         W dir       Figure Key         Genote       Genote         Jack Station       Scille in Feel         Soll Series (within 1000 ft)       Def Log Station	MtA Or Pq PsA PsB	Orrville silt loam, fraquently flooded Pits, quarry Ptatea silt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes	Inclusion No Inclusion	R R
Wear       No       Figure Key         Image: Comparison of the state of the state stat	MtA Or Pq PsA PsB RmB	Orrville silt loam, fraquently flooded Pits, guarry Ptatea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 6 percent stopes Rawson silt loam, 2 to 6 percent stopes	Inclusion No Inclusion Inclusion No	R
SEND:       0       2,000       4,000         Preferred Route       2000 f. Condor       Scale in Fast         Proposed Substation       Scale in Fast       Figure SB         Soll Series (within 1000 ft)       Compare Tomate Tomage for March       Figure SB	MtA Or PsA PsB RmB Sb	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes Rawson silt loam, 2 to 6 percent slopes Sebring silt loam	Inclusion No Inclusion Inclusion Inclusion Inclusion Vesa	R
SEND:       0       2,000       4,000         Preferred Route       2000 f. Condor       Scale in Fast         Proposed Substation       Scale in Fast       Figure SB         Soll Series (within 1000 ft)       Compare Tomate Tomage for March       Figure SB	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yes	R
GEND:       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Conklor       Scille in Fael       Market Proposed Substation       Scille in Fael         Soll Series (within 1000 ft)       Market Polycece:       Uses 7.5-minute Toographic Market Toographic Mark	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yes	R Z. N.
GEND:       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Conklor       Scille in Fael       Market Proposed Substation       Scille in Fael         Soll Series (within 1000 ft)       Market Polycece:       Uses 7.5-minute Toographic Market Toographic Mark	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion       No       Inclusion       Inclusion       No       Yas       Yas       No	
isolation       0       2,000       4,000         Proposed Substation       Soil Series (within 1000 ft)       D       2,000       4,000	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion       No       Inclusion       Inclusion       No       Yas       Yas       No	
isolation       0       2,000       4,000         Proposed Substation       Soil Series (within 1000 ft)       D       2,000       4,000	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion       No       Inclusion       Inclusion       No       Yas       Yas       No	
isolation       0       2,000       4,000         Proposed Substation       Soll Series (within 1000 ft)       0       2,000       4,000	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion       No       Inclusion       Inclusion       No       Yas       Yas       No	
isolation       0       2,000       4,000         Proposed Substation       Soll Series (within 1000 ft)       0       2,000       4,000	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion       No       Inclusion       Inclusion       No       Yas       Yas       No	
isterned Route       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Proposed Substation       Scale in Feet         Soil Series (within 1000 ft)       BASE MAP SOURCE:       US93 7.5-minute Topographic Maps	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yas Yas No No Figure 1	
isterned Route       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Proposed Substation       Scale in Feet         Soil Series (within 1000 ft)       BASE MAP SOURCE:       US93 7.5-minute Topographic Maps	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yas Yas No No Figure 1	
isterned Route       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Proposed Substation       Scale in Feet         Soil Series (within 1000 ft)       BASE MAP SOURCE:       US93 7.5-minute Topographic Maps	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yas Yas No No Figure 1	
isterned Route       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Proposed Substation       Scale in Feet         Soil Series (within 1000 ft)       BASE MAP SOURCE:       US93 7.5-minute Topographic Maps	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yas Yas No No Figure 1	
isterned Route       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Proposed Substation       Scale in Feet         Soil Series (within 1000 ft)       BASE MAP SOURCE:       US93 7.5-minute Topographic Maps	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion Inclusion No Yas Yas No No Figure 1	
identified       identified <td>MtA Or PsA PsB RmB Sb Sf</td> <td>Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam</td> <td>Inclusion No Inclusion No Yes No No Figure 1 Figure 1 C</td> <td></td>	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion No Yes No No Figure 1 Figure 1 C	
identified and ident	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion No Yes No No Figure 1 Figure 1 C	
iGEND:       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Comidor       Scale in Feet       Figure 58         Proposed Substation       Soil Series (within 1000 ft)       BASE MAP SOURCE:       US937.5-minute Topographic Maps Tompson, Philips	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion No Yes Yes No No See Co Co Co Co Co Co Co Co Co Co	
interview       54         interview       66         interview       66 <td>MtA Or PsA PsB RmB Sb Sf</td> <td>Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam</td> <td>Inclusion No Inclusion No Yes Yes No No See Co Co Co Co Co Co Co Co Co Co</td> <td></td>	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently flooded Pits, guarry Platea silt loam, 0 to 2 percent stopes Platea silt loam, 2 to 8 percent stopes Rawson silt loam, 2 to 8 percent stopes Sebring sill loam Sheffield silt loam	Inclusion No Inclusion No Yes Yes No No See Co Co Co Co Co Co Co Co Co Co	
EGEND:       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Scale in Feet       Figure 58         Proposed Substation       BASE MAP Source:       US937.5-minute Topographic Maps Tompson, thic (1971);         Soil Series (within 1000 ft)       Description (1971);       Event (1971);	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No Figure 1 Figure 1 Fi	
EGEND:       0       2,000       4,000         Preferred Route       0       2,000       4,000         2000 ft Corridor       Scale in Feet       Figure 58         Proposed Substation       BASE MAP Source:       US937.5-minute Topographic Maps Tompson, thic (1971);         Soil Series (within 1000 ft)       Description (1971);       Event (1971);	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No Figure 1 Figure 1 Fi	
Preferred Route 2000 ft Corridor 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft)	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft)	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft)	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft)	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft)	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft)	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft) Soi	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion No Inclusion No Yes Yes No T T T	
Preferred Route 2000 ft Corridor Proposed Substation Soil Series (within 1000 ft) Soil Series (within 1000 ft) Soi	MtA Or PsA PsB RmB Sb Sf	Orrville silt loam, fraquently floodad Pits, quarry Platea ait loam, 0 to 2 percent slopes Rawson silt loam, 2 to 8 percent slopes Sobring silt loam Sheffield silt loam Water	Inclusion     Her       No     Production       Production     Producti	
2000 ft Corridor     Scale in Feet     FIGURE 58       Proposed Substation     BASE MAP SOURCE     PREFERRED ROUTE SOILS MAP       Soil Series (within 1000 ft)     US337.5-minule Topographic Maps     PREFERRED ROUTE SOILS MAP	MtA Or Pq PsB RmB Sb St W	Orville silt loam, fraquently floodad Pits, quarry Platea silt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes Sebring silt loam Sheffield silt loam Water Mater		
Proposed Substation     Scale Int Feed     FIGURE 58       Soil Series (within 1000 ft)     USG9 7.5-minute Topographic Maps     PREFERRED ROUTE SOILS MAP	MtA Or Pg PsA PsB RmB Sb St W W	Orville silt loam, fraquently flooded Pits, quarry Platea ailt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes Sobring silt loam Sheffield silt loam Water M		
Soil Series (within 1000 ft) BASE MAP SOURCE: PREFERRED ROUTE SOILS MAP	MtA Or Pea Pea Pea Sb St W W	Orville silt loam, fraquently floodad Pits, quarry Platea ailt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes Sobring silt loam Sheffield silt loam Water Water Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopole Monopol	Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion Inclusion	
Soil Series (within 1000 ft) USGS 7.5-minute Topographic Maps Thompson, Ohio (1971);	MtA Or Pg PsA PsB RmB Sb 3f W W W	Orville silt loam, fraquently floodad Pits, quarry Platea ailt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes Sobring silt loam Sheffield silt loam Water Water M Control of the state sta	Inclusion       No         No       Yes         Yes       No         No       No	
i nompson, Uhia (1971):	MtA Or Pg PsA PsB RmB Sb 3f W W W	Orville silt loam, fraquently floodad Pits, quarry Platea ailt loam, 0 to 2 percent slopes Platea silt loam, 2 to 6 percent slopes Sobring silt loam Sheffield silt loam Water Water M Control of the state sta	Inclusion       Inclusion         No       Yas         Yas       Yas         No       Yas         Yas       Yas	
Existing Transmission Line and East Claridon, Ohio (1970) JOB NO. 14946395 U	MtA Or Pg PsA PsB RmB Sb St W W W V V V V PsB RmB Sb St St St St St St St St St St St St St	Orville silt loam, fraquently floodad Pits, quarry Platea ailt loam, 0 to 2 percent stopes Platea silt loam, 2 to 6 percent stopes Sebring silt loam Sheffield silt loam Water Water Orville silt loam Control of the stope	Inclusion       Inclusion         No       Yas         Yas       Yas         No       Yas         Yas       Yas	

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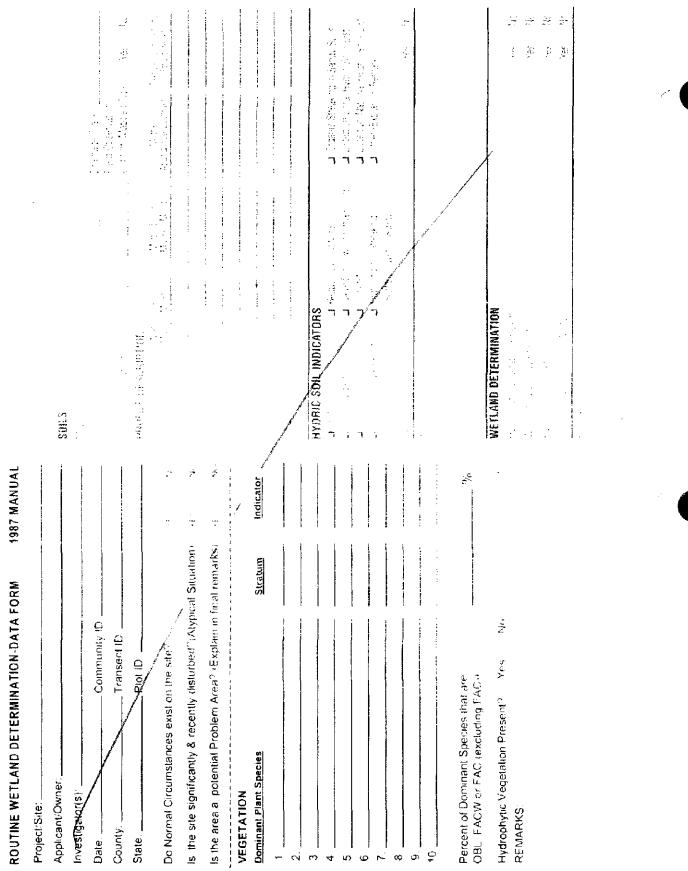
# APPENDIX A

# U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION FORMS

	Percent of Dominant Species that are OBL_FACW or FAC (excluding FAC-) Hydrophytic Vegetation Present? Ves No REMARKS	VEGETATION Dominant Plant Species 1 Pspuls beteraphy lls 2 salix sign 3 salix sign 4 Coras A services 5 Juncos e Saluros 6 Carey blasods 7 ls Lurida 8 C vilpinida 9 Typha Angustabolis	ROUTINE WETLAND DETERMINATION-DA         Project/Site $M_1$ $d_2$ $f_2$ $d_4$ $f_4$
	10	F T T T S S Stratum	Surv Surv uation)
	100 %	Indicator EACW+ EACW+ EACW+ EACW+ CAC OBC OBC	VES NO
WETLAND DETERMINATION Hydrophylic Vegetalion Fresent? Veg n Welland Hydrology Present? Veg n Hydric Soils Present? Veg n REMARKS	HYDRIC SOIL INDICATORS         Histosol         Histosol         Suilidie Odor         Suilidie Odor         Aquic Mosture Regime         High Organic Streation Scill         Hydric Son Present         Yes         REMARKS	SOILS Map Unit Name (Series and Phase) Taxonomy (Subgroup): PROFILE DESCRIPTION Depth Inches) O-6 A Brownink Color Maink Colo	HYDROLOGY         RECORDED DATA (Describe in Remarks):         Stream, Lake or Tide Gauge         Stream, Lake or Tide Gauge         Arenat Pholographs         Other         None Available         FIELD OBSERVATIONS:         Depth of Surface Water in Pit:
No Is this sampling point a Welland" No No No	S Reducing Conditions Geyed of Low-Chroma,Colors Concretions Concretions High Organic Streaking in Sandy Soils List High Organic Streaking in Sindare Layer in Sandy Soils Nic	Drainage Class: Field Observations Confirm Mapped Type: Yes No Motte Abundance/Contrast Concretions.Structure.ek:	PRIMARY indicators: Inundated Saturated in Upper 12" Drainage Patterns in Wetlands SECONDARY Indicators Coxidized Root Channels in UPPER 12" Water Stained leaves Local Soit Survey Data FAC-Neutral Test Other (Explain in Remarks)

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	10 Percent of Dominant Species that are OBL. FACW or FAC (excluding FAC-) Hydrophylic Vegetation Present? Yes No REMARKS REMARKS	minant Plant Spe Phile un p Antho XA Coa can Andro paga Dan tron	ROUTINE WETLAND DETERMINATION-DATA FORM       1987 MANUAL         Project/Site       M.d.Ule S. e. L. S. L. S. Project/Site       M.d.Ule S. e. L. S. P. S. P. S. P. S. S. P. S.
WETLAND DETERMINATION Hydrophytic Vegetalion Present? Yes Weitand Hydrology Present? Yes Hydric Soils Present? Yes	HYDRIC SOIL INDICATORS	SOILS       Map Unit Name       Drain         (Series and Phase)       Drain         Taxonomy (Subgroup):       Field         PROFILE DESCRIPTION       Map         Depth       Mainx Color       Mapite         (inches)       Horizon       Mainx Color       Mapite         Que       A       WYR       X/X       AbundancelContrast	HYDROLOGY         RECORDED DATA (Describe in Remarks):         Stream. Lake or Tide Gauge         Aerial Pholographs         Other         None Available         FIELD OBSERVATIONS:         Depth of Surface Water in Plt:
Is this sampling point a Wetland? Yes No	□ Organic Streaking in Sandy Solf □ Listed on Local Hydric Soils List □ Listed on Valional Hydric Soils List □ Lister in National Hydric Soils List	Drainage Class: Field Observations Confirm Mapped Type: Yes No Texture. Intrast Concretions Structure.etc.	PRIMARY Indicators:         Inundated         Saturated in Upper 12"         Water Marks         Drift Lines         Sediment Deposits Comparing Patterns in Wetlands-         SeconDARY Indicators         Drainage Patterns in Wetlands-         SECONDARY Indicators         Water Stained keaves         Local Soil Survey Data         FAC-Neutral Test         Other (Explain in Remarks)

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**1987 MANUAL ROUTINE WETLAND DETERMINATION-DATA FORM** 

Project/Site:			
Applicant/Owner.			SOLS
nvesligator(s)			:.
Date Community ID.			
County Transect ID			
State:Plot ID			٦ أ
Do Normal Circumstances exist on the site?	·	÷.	
s the site significantly & recently disturbed (Mypecal Situation)	attoru)		
s the area all potential Problem Area? (Explain $\mathfrak m$ final remarks)	harks)	C	
VEGETATION Dominant Plant Species	<u>Stratum</u>	Indicator	
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3			HYDRII
4			
			<b>,</b> ,
1			· <sup></sup> .
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j1			*
Percent of Dominant Species that are OBL_FACW or FAC (excluding FAC-)		یک د ( ا	

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# WETLAND DETERMINATION

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Yes

Hydrophytic Vegetation Present

REMARKS:

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WETLAND DETERMINATOR	•	-		
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#### 1987 USACE MANUAL ROUTINE WETLANDS DETERMINATION DATA FORM

PROJECT SITE. COUNTY: STATE: INVESTIGATORS: Robert Repaisky DATE:			COMM TRANS	ANT OWNER UNITY ID PEM/P ECT ID: PRBW002	55		
Do Normal Circumstances Exist On Is The Site Significantly and Recently Is The Area A Potential Problem Area	y Distarbed? (A		)	Yes Yes Yes	£ €€€		
VEGETATION: Dominant Plant Species	Stratum Mic do	Indicator		Dominant Plant Species	Stratum	Indicator	
2. Salir Fields?	<u></u>	FARCE +		<u>9</u> . 10.			
3. Cornus amomum	Sheriba	FALW		10			
4. Juncus tenuis	Hein	FAL-		12.			
5. Carry VUlpimadea	Herb	OBC		13.	· · · · · · · · · · · · · · · · · · ·		
6. Populas deltaria	Tre	FAC		<u></u>			
7.	<u> </u>			15.			
8				. 16.			
Percent of Dominant Species That Ar Hydrophytic Vegetation Present: Remarks:	e OBL, FACW	, or FAC (Exclud No	ling FAC-):	80			
HYDROLOGY: RECORDED DATA (Describe in Re 	marks)			FIELD OBSERVATIONS Depth of Surface Water: Depth of Free Water in Pin Depth to Saturated Soils: SECON Water Stained Leav Local Soil Survey D FAC-Neutral Test Other (Explain in R	None Exre Sur Soce r DARY INDICATO anels in Upper 12 in es bata	RS:	" (inches) (inches) (inches)
Weiland Hydrology Present? Remarks:	(E)	Νυ				_	
SOILS: Map Unit Name (Series and Phase Taxonomy (Subgroup): PROFILE DESCRIPTION:				Drainage Class: Field Observation Confi	nn Mapped Type:	Yes	No .
Depth Horizon	Matrix ( (Munsel		ottie Color unsell Moist)	Motile		Texture	
(inches) = A	LOY R		7.5 VR SIR	(Abundance / Contrast)		SILC	lav
Rack B	rock		<u>·····································</u>			21145	
C HYDRIC SOIL INDICATORS: Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Hydric Soils Present? Remarks:	No	Reducing Gleyed/ L Concretio	Conditions ow-Clittoma Soils ns itreaking in Sandy			National Hy	ic Soils List ? Idric Soils List
Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present? s This Sampling Point a Wetland? Kemarks:	(TOC)	Na Na Na Na					

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TECHNICIAN:     WATER TABLE:       LOCATION:     DATE:     COMPLETIC DEPTH:       TYPE OF TEST:     TEST NUMBER:       ELEV     DESCRIPTION     DEPTH (FT or IN)       REMA       Image: State of the sta	
Content     DEPTH:       TYPE OF TEST:     TEST NUMBER:       ELEV     DESCRIPTION       Image: Strategy of the	
TYPE OF TEST:         TEST NUMBER:           ELEV         DESCRIPTION         DEPTH (FT or IN)         REMA           Image: Imag	N
DESCRIPTION     (FT or (N)	<u></u>
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	Percent of Dominant Species that are OBL_FACW or FAC (excluding FAC-) Hydrophylic Vegetation Present? Yes vo REMARKS	VEGETATION Dominant Plant Species 1 Philo un prakage 2 An the xan prakage atten 3 Letus or an unlates 4 Pea rom press a 4 Pea rom press a 5 Andre pezen virginius 6 Dan theories a priceta 11 H Facu 11 Facu 10 H Ups	ROUTINE WETLAND DETERMINATION-DATA FORM       1987 MANUAL         Project/Site       M.dllle & etd. De dati       100 MANUAL         Applican/Owner       First Erley       100 Manual         Investigator(s):       LipAs/s       Community ID       100 Manual         Date:       6-26-27       Community ID       144 y         County:       County       Community ID       144 y         State       DU       Plot ID       144 y         Do Normal Circumstances exist on the sile?       NO       NO         is the site significantly & recently disturbed?(Atypical Siluation)       YES       NO         is the area a potential Problem Area? (Explain in final remarks)       YES       NO
WETLAND DETERMINATION Hydrophylic Vegetalion Present? Yes Wetland Hydrology Present? Yes	HYDRIC SOIL INDICATORS History History History Suther Europety Suther Oden Agus Molsture Regime History History Hydric Soil Present Internation Remarks	SOILS Map Unit Name (Series and Phase) Taxonomy (Subgroup) PROFILE DESCRIPTION Dentit Inches) Matrix Culor Matrix Culor	HYDROLOGY         RECORDED DATA (Describe in Remarks):         Stream, Lake or Tide Gauge         Aerial Pholographs         Other         None Available         FIELD OBSERVATIONS.         Depth of Surface Water:         Depth to Saturated Soil         Depth to Saturated Soil         Wetland Hydrology Present?         Yes         No
Is this sampling point a Welland"	ronk Organis Streaking in Samit Streaking in Samit Streaking in Samit Schore	Drainage Class: Field Observations Confirm Mapped Type: Yes No Motite Abundance/Contrast Cuncretions, Structure, etc.	PRIMARY Indicators:          Inundated         Saturated in Upper 12*         Water Marks         Drift Lines         Sediment Deposits (not prevent the sediment for the sediment the sediment of the sediment the sediment (Explain in Remarks)

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DILS			
ap Unit Name		Drain	Drainage Class:
leries and Phase)			
axonomy (Subgroup)		Field	- Field Observations Confirm
		Mapp	Mapped Type: Yes No
ROFILE DESCRIPTION			
epth Matrix Color	Molitie	Moluti	Texture
ches) Honzon rMunsell Moist- (Munsell Moisti Aljundance/Contrast Concretions,Structure,etc	insell Moisti	Aljundance/Contrast	Cuncretions, Structure, etc.

REMARKS

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#### 1987 USACE MANUAL ROUTINE WETLANDS DETERMINATION DATA FORM

PROJECT SITE COUNTY STATE: INVESTIGATORS: Robert Repasky DATE:			COMM TRANS	ant owner unity id fect id: d <b>RBMO</b>	EM/PS	5		
Do Normal Circumstances Exist On Is The Site Significantly and Recently Is The Area A Potential Problem Are	y Distuibed <sup>®</sup> (A		ation)	र् <u>शिक</u> Yes Yes		2 €\$ \$ \$ \$		
VEGETATION: Dominant Plant Species	Stratem	Indicator		Dominant Pla	ant Species	Stratum	Indicator	
1. Juncus alfusus		FALW						
2. Salix rigida?	<u> </u>	000		10			· <u>··</u> ····	
3. Cornus amonum		<u>FA</u>						
4. Suncios terroris	<u></u>	- FA		12.				
5. Charry Volpinster		06						
6. Populas detterit		FAC	<u> </u>	14.			·	
<u>7.</u>				<u>    15.                                </u>				
8. Percent of Dominant Species That Ar Hydrophytic Vegetation Present Remarks:		. or FAC (E No	xcluding FAC-)	<u>16</u>	80	<b></b> _ <b>_</b> _		<sup>-</sup>
HYDROLOGY: RECORDED DATA (Describe in Ret Stream, Lake, or Tide Group Aerial Photographs Other None Available PRIMARY INDICATORS Inundated Saturated in the Upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Wetland Hydrology Present? Remarks:	marks)	No		Water S	ace Water: Water in Pit rated Soils SECOND d Root Chaun tained Leaves ail Survey Dat eutral Test	ARY INDICATO rels in Upper 12 in la		(Inches) (inches) (inches)
SOILS:								-
Map Unit Name (Series and Phase Taxonomy (Subgroup) PROFILE DESCRIPTION				Drainage Cl Field Observ		n Mapped Type	Yes	No
Depth Horizon (inches)	Matrix C		Mottle Color (Munsell Moist)	Moule <u>IAbundance</u>	/Coutrast)		Texture	
0-4 A	<u>IOYR</u>	5/1	<u> </u>	5			SITC 2	197
<u>B</u> C	rock							
HYDRIC SOIL INDICATORS ——Histosol ——Histic Epipedon ——Suffidic Odor ——Aquic Moisture Regime Hydric Soils Present <sup>2</sup> Yes	Na	Gley Cone	ucing Conditions red/ Low-Chroma Soils cretions mic Streaking in Sand					ic Soils List - <sup>2</sup> Adric Soils List
Remarks						1 • Jacob 10 • 10 • 10 • 10 • 10 • 10 • 10 • 10		** *===
Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Sorts Present? Is This Sampting Pount a Wetland? Imarks	( COC	No Na Na No						

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TECHNÍ	CIAN:		₩₽	TER TABLE:
LOCATI	NC:	DATE: COMPLETION DEPTH:		COMPLETION DEPTH:
TYPE O	F TEST:	TEST NUM	TEST NUMBER:	
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Percent of Dominant Species that are OBL FACW or FAC rexcluding FAC-; Hydrophylic Vegetation Present? Yes No REMARKS	VEGETATION Dominant Plant Species 1 Philo in praking Stratum Indicator 2 Antho in praking the provident of the providence of the provid	ETERMINATION-DATA FORM       1987 N         Ile S. e. Id. Je. Je. Je.       1987 N         Ile S. e. Id. Je. Je.       1         In robust       1         Image: International control of the site?       1         Plot ID       1         Image: International control of the site?       1         Problem Area? (Explain in final remarks)       1
HYDRIC SOIL INDICATORS         Histown         Instance Surgers         Instance Surgers <td>Solls       Map Unit Name       (Series and Phase)       Taxonomy (Subgroup)       Field Observations Confirm       Mapped Type       PROFILE DESCRIPTION       Drph       Main Color       Mainself Mussi       Munself Mussi       An us YR       YR</td> <td>HYDROLOGY         RECORDED DATA (Describe in Remarks)         Stream. Lake or Tide Gauge         Aenal Photographs         Other         None Available         FIELD OBSERVATIONS         Depth of Surface Water in Pit         Depth to Free Water in Pit         Ves         None Hydrology Present?         Yes         Netland Hydrology Present?         REMARKS             REMARKS             PRIMARY Indicators         Drainage Pattems in Upper 12*         Drainage Pattems in Weilands         Doxidized Root Channels in UPPER 12*         Ves         No         Present?         Yes         Noher</td>	Solls       Map Unit Name       (Series and Phase)       Taxonomy (Subgroup)       Field Observations Confirm       Mapped Type       PROFILE DESCRIPTION       Drph       Main Color       Mainself Mussi       Munself Mussi       An us YR       YR	HYDROLOGY         RECORDED DATA (Describe in Remarks)         Stream. Lake or Tide Gauge         Aenal Photographs         Other         None Available         FIELD OBSERVATIONS         Depth of Surface Water in Pit         Depth to Free Water in Pit         Ves         None Hydrology Present?         Yes         Netland Hydrology Present?         REMARKS             REMARKS             PRIMARY Indicators         Drainage Pattems in Upper 12*         Drainage Pattems in Weilands         Doxidized Root Channels in UPPER 12*         Ves         No         Present?         Yes         Noher

Pr-w003 UPL

Pr-would wetland - 2080 DATA FORM ML-2081

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# DATA FORM **ROUTINE WETLAND DETERMINATION** (1987 COE Wetlands Determination Manual)

Project / Site: Muddlefield Applicant / Owner: h-st Energy Investigator: ML, L.B.		Date: <u>S/867</u> County: <u>Grauga</u> State: <u>Ohio</u>
Do normal circumstances exist on the site? Is the site significantly disturbed (Atypical situation)? Is the area a potential problem area? (explain on reverse if needed)	Yes X No Yes No X Yes No X	Community ID: <u>PEr/PS/P</u> Transect ID: Plot ID:

# VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	<u>Stratum</u>	Indicator
1. <u>Onoclea stasibilis</u> 2. <u>Impotiens capensu</u> 3. <u>Viburnum dentatum</u> 4. <u>Carex sp</u> 5. <u>Phraymites australis</u> 6 8	Herb Herb Shrub Herb Herb	FACW FACW FACW	9		
Percent of Dominant Species	; that are	OBL, FACW	V, or FAC excluding FAC-).	1602,	
Remarks:					

# HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge	Wetland Hydrology Indicators
Aerial Photographs Other	Primary Indicators: Inundated Saturated in Upper 12"
No Recorded Data Available	Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands
Depth of Surface Water: <u>hone</u> (in.)	Secondary Indicators:
Depth to Free Water in Pit: <u>(i</u> n.)	Oxidized Roots Channels in Upper 12" Water-Stained Leaves
Depth to Saturated Soil:(in.)	Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

SOILS

Map Unit Name (Series and Phase):			Drainage Class	:	
Taxonomy (Subgro	up):		Confirm Mapped Type? Yes No		
Profile Description: Depth (inches) Horizon I	Matrix Colors (Munsell Moist) 10 Y R S/]	Mottle Colors ( <u>Munsell Moist)</u>	Mottie <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>SIITy-Clay</u>	
Reducing	ipedon Odor pisture <b>Regime</b>	High Organ Listed Listed	retions Organic Content in Su hic Streaking in Sandy t On Local Hydric Soll t on National Hydric So (Explain in Remarks)	s List	
WETLAND DETE					
Hydrophytic Vegeta Wetland Hydrology Hydric Soils Presen	Present? Ye	es <u> </u>	Is the Sampling Within a Wetlar		

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Remarks:

Pr-wooll UPL

upland data point for 2080 + 2080

# DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Determination Manual)

Project / Site: Middle Field Applicant / Owner: First Energy Investigator: ML, L.B.	Date: <u>5/8/07</u> County: <u>Geguge</u> State: <u>Chio</u>				
Do normal circumstances exist on the site?       Yes_X_No       Community ID:         Is the site significantly disturbed (Atypical situation)?       YesNo_X       Transect ID:         Is the area a potential problem area?       YesNo_X       Plot ID:         (explain on reverse if needed)       YesNo_X       Plot ID:					
VEGETATION	Upland Messic Harchwood				
Dominant Plant Species       Stratum       Indicator         1. Fragariá Virginiana       Hrib       FACU         2. Suludaça Canadomi;       Hrib       FACU         3. Vibuvnum cientatum       Shrib       FAC         4. Rubus Sp       Hrib       FACU         5. Parthenaurus gungustan Vinu       PACU       FAC         6	Dominant Plant Species         Stratum         Indicator           9.				
HYDROLOGY					
Recorded Data (Describe In Remarks): Stream, Lake, or Tide Gauge	Wetland Hydrology Indicators				

\_\_\_\_ Aerial Photographs \_\_\_ Other

No Recorded Data Available

Field Observations:

Depth of Surface Water: <u>none (in.)</u>

Depth to Free Water in Pit: non (in.)

<u>/////.</u>(in.)

Depth to Saturated Soil:

Primary Indicators:

- Saturated in Upper 12" Water Marks
- \_\_\_\_ Drift Lines
- \_\_\_\_ Sediment Deposits
- \_\_\_\_ Drainage Patterns in Wetlands

Secondary Indicators:

- \_\_\_\_ Oxidized Roots Channels in Upper 12"
- \_\_\_\_ Water-Stained Leaves
- Local Soil Survey Data
- \_\_\_\_ FAC-Neutral Test
- \_\_\_\_ Other (Explain in Remarks)

Remarks:

1

SOILS

Map Unit Name (Series and Phase):	Drainage Class:				
Taxonomy (Subgroup):	Confirm Mapped Type? Yes No				
1-816 A/B IOYRYS	Mottle Colors       Mottle       Texture, Concretions, Structure, etc.				
Hydric Soil Indicators:      Concretions        Histosol      Concretions        Histic Epipedon      High Organic Content in Surface Layer in Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Aquic Moisture Regime      Listed On Local Hydric Soils List        Gleyed or Low-Chroma Colors      Other (Explain in Remarks)         Remarks:					
WETLAND DETERMINATION					
Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Solls Present?	Yes No <u></u> Is the Sampling Point Yes No <u></u> Within a Wetland? Yes No <u></u> Yes No <u></u>				

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Remarks:

#### DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

wetland 215 Pr-w005

Project/Site: <u>Middle Field</u>	Date: <u>\$18107</u>		
Applicant/Owner: <u>First Energy</u>	County: <u>Geauga</u>		
Investigator: <u>ML.,L.B</u>	State: <u>OH</u>		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes Yes	S C S	Community ID : <u>PE m</u> Transect ID: Plot ID:

### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant_Plant Species	Stratum Indicator
1. Phragmites australes	Herb FAcw	9	
2		10	
3		11	
4		12	
5		13	<u> </u>
6		14	
7	I	15	
8		16	
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	100 020	
Remarks:			

### HYDROLOGY

Recorded Data (Describe in Remarks):     Stream, Lake, or Tide Gauge     Aerial Photographs     Other     No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water: home (in.)	Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit: <u>8</u> (in.)	Local Soil Survey Data
Depth to Saturated Soil:(in.)	Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Field	age Class: Observations onfirm Mapped Type? Yes	 No
Profile Description:           Depth           (inches)         Horizon           () -3         A           3-12         3	Matrix Color ( <u>Munsell Moist)</u> 104R 4/2 104R 3/1	Mottle Colors (Munsell Moist) 	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Silty clay</u> <u>Silty clay</u>	
Hydric Soil Indicators: Histosol Histic Epiped Sulfidic Odor Aquic Moistu Reducing Co Gleyed or Lo Remarks:	r Ire Regime		Concretions High Organic Content in Organic Streaking in Sa Listed on Local Hydric S Listed on National Hydri Other (Explain in Remar	ioils List c Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	<b>ACE</b>	No No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circ Yes	ile) No
Remarks:				••••••••••••••••••••••••••••••••••••••		
	· · · · · · · · · · · · · · · · · · ·			Approve	d by HQ	USACE 3/92

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#### DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Upland point for wetlands 214 + 213

Pr-W005 UPL

Project/Site: <u>MuddleField</u>	Date: <u>5/8/07</u>		
Applicant/Owner: <u>First Energy</u>	County:		
Investigator: <u>ML.L.B</u>	State:		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes Yes	No No No	Community ID : <u> </u>

# VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Festuca eliator	Herb FACU	9	
2. Solidago canadonsis	Herb FACU	10	
3		11	
4		12	
5		13	<u> </u>
6		14	
7		15	
8		16	
Percent of Dominant Species that (excluding FAC-).	t are OBL, FACW or FAC	0%	
Remarks:			

### HYDROLOGY

Aerial Photographs Other No Recorded Data Available	Inundated Saturated in Upper 12 Inches Water Marks
	Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water: YO ht_(in.)	Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit: <u>hong</u> (in.)	Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test
Depth to Saturated Soil: hm (in.)	PAC-Neubai Test Other (Explain in Remarks)

SOILS

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-	Phase):			Field	age Class: Observations infirm Mapped Type? Yes	No
$\frac{\text{Profile Depth}}{\text{Depth}}$ $\frac{1 - C}{C + C}$	scription: HorizonA	Matrix Color (Munsell Moist) 104R41) rock	Mottle Colors (Murisell_Moist)	Mottle Abundance/Contrast	Texture, Concretions, <u>Structure, etc.</u> <u>SIIT, Clay</u>	
Hydric Soil	_ Histosol _ Histic Epipeo _ Sulfidic Odor _ Aquic Moistu _ Reducing Co	r re Regime		Concretions High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydric Other (Explain in Remar	oils List c Soils List	
Remarks:						

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#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	で で で で で で に に に に に と 。 の の の の の の の の の の の の の の の の の の	Is this Sampling Point Within a Wetland?	(Circ Yes	(ek)
Remarks:					
			Approve	d by HQ	USACE 3/92

Wetland 214 Pr-w006

#### DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Middlefield</u>	Date: <u>\$18707</u>		
Applicant/Owner: <u>First Energy</u>	County: <u>Geauga</u>		
Investigator: <u>ML</u> , L.B	State: <u>OH</u>		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes Yes	No NO NO	Community ID : <u>PEM</u> Transect ID: Plot ID:

#### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Phragmites australis	Herb FACW	9	
2		10	<u> </u>
3		11	
¢'		12	
5		13	
6		14	
7		15	
8		16	
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC		
Remarks:			

# HYDROLOGY

Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines			
Sediment Deposits        Drainage Patterns in Wetlands         econdary Indicators (2 or more required):        Oxidized Root Channels in Upper 12"        Water-Stained Leaves        Local Soil Survey Data        FAC-Neutral Test        Other (Explain in Remarks)			

SOILS

			Field	inage Class: d Observations Confirm Mapped Type? Yes	 No
<u>1-2</u>	20: IZON (Munseli M A IOYR: B IOYR C	loist) (Munsell Moist)	Mottle <u>Abundance/Contras</u>	Texture, Concretions, Structure, etc. Silt Silt, day	
Sulfi Aqui Red		plors	Concretions High Organic Content i Organic Streaking in S Listed on Local Hydric Listed on National Hyd Other (Explain in Rem	Soils List Iric Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	<b>B</b>	No No No	(Circl <b>e</b> )	(Circle) Is this Sampling Point Within a Wetland? () No
Remarks:				
				Approved by HQUSACE 3/92

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#### DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Upland point for wetlands 214 + 213

Pr-woog UPL

Project/Site: <u>Muddlefield</u>	Date: <u>5/7/07</u>		
Applicant/Owner: <u>First Energy</u>	County:		
Investigator: <u>ML.L.B</u>	State:		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes Yes	NO NO NO	Community ID : <u>PEM</u> Transect ID: Plot ID:

### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Festuca eliator	Herb FACU	9	
2. Solidago canadonsis	Herb FACU	10	
3		f1	
4		12	
5	·	13	
6		14	
7	<b></b> _	15	
8	- <u></u>	16	
Percent of Dominant Species that (excluding FAC-).	t are OBL, FACW or FAC		
Remarks:			

#### **HYDROLOGY**

Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available		inundated Saturated in Upper 12 Inches Water Marks Drift Lines
ield Observations:		Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water.	<u> Maht</u> (in.)	Oxidized Root Channels in Upper 12" Water-Stained Leaves
Depth to Free Water in Pit:	<u>honr (in.)</u>	Local Soil Survey Data FAC-Neutral Test
Depth to Saturated Soil:	homy (in.)	Other (Explain in Remarks)

SOILS

	<b>d Phase):</b>			Field	age Class: Observations onfirm Mapped Type?	Yes No
Profile De Depth (inches) ]-C C+	<u>scription</u> : <u>Horizon</u>	Matrix Color ( <u>Munsell_Moist)</u> <u>104R41</u> <u>roch</u>	Mottle Colors (Munsell_Moist) 	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Silty Clay</u>	
	Histosol Histic Epiped Sulfidic Odo Aquic Moistu Reducing Co Gleyed or Lo	r ire Regime		Concretions High Organic Content in Organic Streaking in Sa Listed on Local Hydric S Listed on National Hydri Other (Explain in Remar	iolis List c Soils List	oils

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Y <b>es</b> Yes	でで 他の 他の 他の 他の 他の 他の 他の 他の 他の 他の	Is this Sampling Point Within a Wetland?	(Circ Yes	de) O
Remarks:					
			Approved	by HQ	USACE 3/92

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Wetland 212r Pr-W007

#### DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Middlefield</u> Applicant/Owner: <u>First Entroy</u> Investigator: <u>ML, LB</u>		······································	Date: <u>5/8/07</u> County: <u>5¢4.044</u> State: <u>014</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	≥ 2 2 2 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3	Community ID : <u>PEM / Pss</u> Transect ID: Piot ID:

#### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum	Indicator
1. Typha angustifolia	Herb OBL	9		
2. Acorus calamus	Herb OBL	10		
3. Impatiens capensus	Harb FACLO	11		
4. Oneclea sensibilis	Ned OBL	12		
s. Cornus a momum	Shrub FACW	13	<u></u>	
6	·	14		
7		15		
8		16		
Percent of Dominant Species that (excluding FAC-).	t are OBL, FACW or FAC	100%		,
Remarks:				

#### HYDROLOGY

Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits     Drainage Patterns in Wetlands     Secondary Indicators (2 or more required);
Depth of Surface Water: 1-2 (in.)	Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit:(in.)	Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test
Depth to Saturated Soil:(in.)	Other (Explain in Remarks)

SOILS

	Phase):			Field (	age Class: Observations onfirm Mapped Type? Yes No
Profile Der Depth (inches) 1-4 ∠-12	scription: Harizon B	Matrix Color (Munsell Moist) 10 YR 4/1 10 YR 4/1	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, Structure, etc. Silty clay Silty loam
Hydric Soil	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistu _ Reducing Co	re Regime		Concretions High Organic Content in Drganic Streaking in Sar Listed on Local Hydric S Listed on National Hydric Other (Explain in Reman	olis List c Soils List

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# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	<b>BCC</b>	No No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circ Yes	le) No
<b>Remarks:</b>	-		···· , <u> </u>			
		·	·····	Approve	d by HQ	USACE 3/92

Upland point For Wetland 2125

#### DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Pr-W007 UPL

Project/Site: Interfection of the field Applicant/Owner: First Finangy Investigator: L_B	Date:         5/8/07           County:         Geavgq           State:         OH		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes Yes	N 2000 2000	Community ID : Transect ID: Plot ID:

#### VEGETATION

Upland Young Mesic Hardwad Forst

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator		
1. Fraxinus ampricana	Ther FACU	9			
2. Potentilla simpler	Herb FACU-	10			
3. Solidago canadensis	Hous UPL	11			
4. Acer sacchenim	Herb FAQ-	12			
5		13			
6		14			
7		15			
8		16			
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC				
Remarks:					
Herb layer sparse					

HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water: <u>honc (in.)</u>	Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit: <u>home (in.)</u>	Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test
Depth to Saturated Soil: <u>inema (in.)</u>	Other (Explain in Remarks)
Remarks:	

SOILS

	l Phase):			Field	age Class: Observations onfirm Mapped Type? Yes No
$\frac{\text{Profile Der}}{\text{Depth}}$ $\frac{1 - \zeta}{\zeta - 12}$	scription: Horizon A B 	Matrix Color (Munsell Moist) 10 VR 9/3 10 VR 513	Mottle Colors (Munsell_Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Silty clay</u> <u>Silty clay</u>
Remarks:	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistu _ Reducing Co	re Regime		Concretions High Organic Content in Drganic Streaking in Sa Isted on Local Hydric S Isted on National Hydri Other (Explain in Remar	iolis List c Soils List

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	(Circle)	Is this Sampling Point Within a Wetland?	(Circ Yes	xe) NoC
Remarks:					
			Approve	d by HO	USACE 3/92

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# DATA FORM **ROUTINE WETLAND DETERMINATION**

(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Grauga Co.</u>	Date: <u>5/7/2007</u>	
Applicant/Owner: <u>FirstEnergy</u>	County:Geauga	
Investigator: <u>mi</u>	State: <u>OH</u>	
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Alypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID: <u>pfo</u> Transect ID: Plot ID: 203b

# VEGETATION

Dominant Plant Species 1. Ulmus americana 2. Rhus radicans 3. Rhus radicans	<u>Stratum</u> <u>T</u> <u>H</u> V	<u>FACW+</u> FAC+ FAC+	Dominant Plant Species           9           10	
4. Tilia americana		FACU+	11	
6		· ····	13	
6 7			14 15	
B			16	
Percent of Dominant Species that are O (excluding FAC-).	BL, FACW or	r FAC	75	
Remarks;				••••••••••••••••••••••••••••••••••••••

# HYDROLOGY

X Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water:(in.)	Oxidized Root Channels in Upper 12 Inches X Water-Stained Leaves
Depth to Free Water in Pit:(in.)	Local Soil Survey Data X FAC-Neutral Test
Depth to Saturated Solit8(in.)	<u>X</u> Other (Explain in Remarks)
and the second secon	

Remarks: bare ground indicates sat, saturated above hardpan

	d Phase):			Field	inage Class: d Observations firm Mapped Type? Yes No
<u>Profile De</u> Depth (inches)	scription: Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Maist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	a	10yr 4/2			silty loam
10-14	b	10yr 4/1	10ут 5/6	m/d	sil <b>t clay</b>
- F	indicators:	<u></u>	Concr		
	istic Epipedor utfidic Odor quic Moisture educing Cond leyed or Low	Regime	Crgani Listed	rganic Content in Surface La ic Streaking in Sandy Soils on Local Hydric Soils List on National Hydric Soils List (Explain in Remarks)	yer in Sandy Soils
Remarks:	fragipan				

### WETLAND DETERMINATION

Hydrophylic Vegetation Present? Wetland Hydrology Present? Hydric Solls Present?	Yes No (Circle) Yes No Yes No	(Circle) Is this Sampling Point Within a Wetland? Yes No
Remarks:		

Approved by HQUSACE 3/92

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Pr. wood

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# DATA FORM ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Geauga Co.</u> Applicant/Owner: <u>PirstEnergy</u> Investigator: <u>mt</u>		Date: <u>5/7/2007</u> County: <u>Geauga</u> State: <u>OH</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes <u>No</u> Yes <u>No</u>	Community ID: pss Transect ID: Plot ID: 203a

# VEGETATION

Dominant Plant Species           1. Cornus amonum           2		Dominant Plant Species           9	
8		16	
Percent of Dominant Species that are Of (excluding FAC-).	BL, FACW or FAC	100	
Remarks:			

# HYDROLOGY

Recorded Data (Describe in Remarks):     Stream, Lake, or Tide Gauge     Aerial Photographs     Other     X_No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: inundated Saturated in Upper 12 inches Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water:(in.)	
Depth to Free Water in Pit:(in.)	Local Soil Survey Data Local Soil Survey Data _X_FAC-Neutral Test
Depth to Saturated Soil:(in.)	Other (Explain in Remarks)
Remarks:	· · · · · · ·

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	d Phase): _		······································	Eie	inage Class: Id Observations Ifirm Mapped Type? Yes No
<u>Profile De</u> Depth (inches)	scription; Horizon	Matrix Color (Mun sell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3	<u>a</u>	10yr 4/2			silty loam
4-7	a2	10yr 4/2	10yr 5/6	m/d	silt clay
7-20	<u>b</u>	10yr6/1	10yr6/8	c/d	silt clay
	Indicators: listosol listic Epipede iulfidic Odor quic Moistur ceducing Co ileyed or Loo	e Regime	Crgani Listed	etions rganic Content in Surface La c Streaking in Sandy Soils on Local Hydric Soils List on National Hydric Soils List (Explain in Remarks)	yer in Sandy Soils
Rema <b>rks</b> :					

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes No (Circle) Yes No Yes No	(Circle) Is this Sampling Point Within a Wetland? <u>Yes</u> No
Remarks:		

Approved by HQUSACE 3/92

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# DATA FORM ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Geauga Co.</u> Applicant/Owner: <u>FirstEnergy</u> Investigator: <u>ml</u>		Date: <u>5/7/2007</u> County: <u>Geauga</u> State: <u>OH</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<u>Yes</u> No Yes <u>No</u> Yes <u>No</u>	Community ID: pss Transect ID: Plot ID: 202

# VEGETATION

Dominant Plant Species           1. Cornus amomum           2.           3.           4.           5.           6.		Dominant Plant Species           9	
7		15	
8		16	
Percent of Dominant Species that are O (excluding FAC-).	BL, FACW or FAC	100	
Remarks:			
·			

Recorded Data (Describe in Remarks):     Stream, Lake, or Tide Gauge     Aerial Photographs     Other     X No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: inundated X Saturated in Upper 12 Inches Water Marks Orift Lines
Field Observations:         Depth of Surface Water:         Depth to Free Water in Pit:        (in.)         Depth to Saturated Soil:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 Inches X Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	



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	d Phase):		·····	- 19/	inage Class: d Observations firm Mapped Type? Yes No
Profile Des Depth (inches) 0-6 6-20	Horizon Borizon 8 b	Matrix Color (Munsell Moist) 10yr 5/2 10yr 6/2	Mottle Colors (Munsell Moist) 10yr 6/6	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc. silty loam silt olay
— н \$ А R	istosol istic Epipedol ulfidic Odor quic Moisture educing Con	Regime	Organi Listed Listed	ntions rganic Content in Surface La c Streaking In Sandy Solls on Local Hydric Soils List on National Hydric Soils List Explain in Remarks)	yer in Sandy Soils

### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes No (Circle) Yes No Yes No	(Circle) Is this Sampling Point Within a Wetland? <u>Yes</u> No
Remarks:		

Approved by HQUSACE 3/92

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# DATA FORM ROUTINE WETLAND DETERMINATION

(1987 COE Wetlands Delineation Manual)

Project/Site. <u>Geauga Co.</u> Applicant/Owner: <u>FirstEnergy</u> Investigator: <u>ml</u>		Date: <u>\$/7/2007</u> County: <u>Geauga</u> State: <u>OH</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<u>Yes</u> No Yes No Yes No	Community ID: <u>pem/pss</u> Transect ID: Plot ID:

# 

Dominant Plant Species	Stratum	ndicator	Dominant Plant Species	Stratum Indicator
1: Acorus americanus (A	H	OBL	9	
2. Onoclea sensibilis	н	FACW+	10	
3. Impatiens capensis	H	FACW+	11	
4. Cornus amomum	S	FACW+	12	
5. Viburnum recognitum	5	FACW+	13	
6			14	
7		<u> </u>	15	
8			16	
			<u></u>	
Percent of Dominant Species that a (excluding FAC-).	ING OBL, FACW O	r FAC	100	
Remarks:				

X Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits <u>X</u> Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water:(in.)	Oxidized Roof Channels in Upper 12 Inches
	X Water-Stained Leaves
Depth to Free Water in Pit:(in.)	Local Soil Survey Data FAC-Neukral Test
Depth to Saturated Soil: <u>surfa</u> (in.)	Other (Explain in Remarks)
Remarks; well defined degression	



Profile Description:       Matrix Color       Mottle Colors       Mottle Abundance/       Texture, Concretions, Structure, etc.         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20       a/b       IOyr 4/1       7.5yr 4/6       f/d       silty clay         20 <td< th=""></td<>
indicators:
HistosolConcretionsHigh Organic Centent In Surface Layer in Sandy SoilsHigh Organic Streaking in Sandy Soils
HistosolConcretionsHigh Organic Centent In Surface Layer in Sandy SoilsHigh Organic Streaking in Sandy Soils
HistosolConcretionsHigh Organic Centent In Surface Layer in Sandy SoilsHigh Organic Streaking in Sandy Soils

## WETLAND DETERMINATION

Hydrophylic Vegetation Present? Welland Hydrology Present? Hydrio Solls Present?	Yes No (Circle) Yes No Yes No	(Circle) Is this Sanapling Point Within a Wetland? Yes No
Remarks: follows channel ow out of a	Portidor	

Approved by HQUSACE 3/92

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Project/Site: <u>Geauga Co.</u>	Date: <u>5/7/2007</u>	
Applicant/Owner: <u>FirstEnergy</u>	County: <u>Geauga</u>	
Investigator: <u>m1</u>	State: <u>OH</u>	
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<u>Yes</u> No Yes <u>No</u> Yes <u>No</u>	Community ID: <u>pem/pss</u> Transect ID: Plot ID: 201a

## VEGETATION

Dominant Plant Species         1. Aconss americanus         2. Onoclea sensibilis         3. Impatiens capensis         4. Cornus annomum         6. Viburnum recognitum         6	 	Dominant Plant Species           9		
Percent of Dominant Species that are O (excluding FAC-). Remarks:	 	100	<u></u>	

# HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other XNo Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: Inundated _XSaturated in Upper 12 Inches Water Marks Orifit Lines
Field Observations:         Depth of Surface Water:         Depth to Free Water in Pit:         Depth to Saturated Soil:	Sediment Deposits _X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 Inches _X Water-Stained Leaves Local Soil Survey Data _X FAC-Neutral Test Other (Explain in Remarks)
Remarks: well defined depression	

	SC	H	LS
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Profile Description:       Matrix Color       Mottle Colors       Mottle Abundance/       Texture, Concretions,         0-3       A       10yr 4/1       10yr 4/4       Pd       silty clay         0-3       A       10yr 4/1       10yr 4/4       Pd       silty clay         3-20       B       10yr 5/1       7.5yr 4/6       m/d       silt clay		d Phase):			Field	nage Class: d Observations firm Mapped Type? Yes No
Histosol       Concretions         Histic Epipedon       High Organic Content in Surface Layer in Sandy Soils         Sulfidic Odor       Organic Streaking in Sandy Soils         X Aquic Moisture Regime       Listed on Local Hydric Soils List         X Reducing Conditions       Listed on National Hydric Soils List         X Gleyed or Low-Chroma Cotors       Other (Explain in Remarks)	Depth (inches). 0-3	Horizon A	(Munsell Moist) 10yr 4/1	( <u>Munsell Moist)</u> 10yr 4/4	Size/Contrast	Structure, etc.
		istosol istic Epipedor ulfidic Odor quic Moisture educing Conc	Regime ditions	High Or Organic Listed o Listed o	ganic Content in Surface Lay : Streaking in Sandy Soils on Local Hydric Soils List on National Hydric Soils List	yer in Sandy Soils

## WETLAND DETERMINATION

Hydrophytic Vegelation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes No (Circle) Yes No Yes No	(Circle) Is this Sampling Point Within a Wetland? <u>Yes</u> No
Remarks: follows channel, e-w out of a	zorridor	

Approved by HQUSACE 3/92

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A DEVENTION AND A DEC

W - 218

Pr-wol3

Project/Site: <u>Geauga</u> Applicant/Owner: <u>First Enrrgy</u> Investigator: <u>ML, LB</u>		Date: <u>5/8/07</u> County: <u>Селида</u> State: <u>0</u> Ц
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID P <u>55 1PE</u> Transect ID: Plot ID:

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## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum	Indicator
1. Viburnum dritatum	Shrub FAC	9	<u> </u>	
2 On octasensibilis	Herb OBL	10		
3. Typha angushikaha	Hros OBL	11		
4. Carry SU	Hrub -	12	·	
5. Cornus ammunum		13	*	<u> </u>
6. Rosa palustris	Shrib OBL	14		
7		15		
8		16		
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	1009,		
Remarks:				

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits     Drainage Patterns in Wetlands     Secondary Indicators (2 or more required):
Depth of Surface Water:(in.)	Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit:	Water-Stained Leaves
Depth to Saturated Soil:(in.)	FAC-Neutral Test Other (Explain in Remarks)
Remarks:	
· · · · · · · · · · · · · · · · · · ·	

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes	No
Profile De Depth (inches) ]-12_	scription: Horizon A/B_	Matrix Color (Munsell Moist) 10 Y R 2/1	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, <u>Structure, etc.</u> Silt, lagm	
		· · · · · · · · · · · · · · · · · · ·				
-	I Indicators: Histosol Histic Epiped Sulfidic Odor Aquic Moistu Reducing Co Gleyed or Lo	re Regime		Concretions High Organic Content in Organic Streaking in Sar Isted on Local Hydric S Isted on National Hydric Xher (Explain in Remar	oiis List c Soils List	
Remarks:						

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Hydric Soils Present? Yes	No No No	(Circle)	(Circle) Is this Sampling Point Within a Wetland? Yes No
Remarks:			
			Approved by HQUSACE 3/92

Upland data point for Uctland 218

Pr-wold UPL

Project/Site: <u>Scaugu</u> Applicant/Owner: <u>First Energy</u> Investigator: <u>ML, L.B</u>		Date: <u>5/8/07</u> County: <u>6eauga</u> State: <u>0</u> 14
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : Transect ID; Plot ID:

## VEGETATION

Upland Youn; mesic Hordwad

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Malus Malus	Tre UPL	9	a
2. Fraxinus americanus	Tree FACU	10	
3. UNEMOUN QUELS	Herb ++	11	······································
1. Prunus scröting	Tr: FACU	12	
5		13	<u> </u>
6		`14	
7		15	
8		16	
Percent of Dominant Species tha (excluding FAC-),	t are OBL, FACW or FAC	0%	
Remarks:			

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations;         Depth of Surface Water: <u><u>horne</u> (in.)         Depth to Free Water in Pit:       <u>horne</u> (in.)         Depth to Saturated Soil:       <u>horne</u> (in.)   </u>	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	L <u> </u>

	1 Phase):			Field	age Class: Observations onfirm Mapped Type? Yes	No
Profile De Depth (inches) <u>I-C</u> ( <u>C+</u>	scription: HorizonA B	Matrix Color ( <u>Munsell Moist)</u> <u>10764/3</u> <u>rack</u>	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Srlft; &lt; lay</u>	
	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistu _ Ręducing Co	re Regime		Concretions High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydri Other (Explain in Remar	iolis List c Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	No (Circle) No No	Is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:			<b>*</b>	
<u></u>				d by HQUSACE 3/92

Wetland 217 Emergent Pr-WO14

Project/Site: <u>Ceauga</u>	Date: <u>5/8/07</u>	
Applicant/Owner: <u>First Enrrsy</u>	County: <u>Geauga</u>	
Investigator: <u>m L., L B</u>	State: <u>ON</u>	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : <u>PEM_</u> Transect ID: Plot ID:

## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator	
1. Acorus calamos	Herb OBL	9		
2. Unknown gress	Herb -	10	<u></u>	
3		11		
4		12		
5		13		
6		14	<u> </u>	
7		15		
8		16		
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	100%		
Remarks:			<u>.</u>	

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations: Depth of Surface Water: <u>hom c</u> (in.) Depth to Free Water in Pit: <u>ちい</u> (in.) Depth to Saturated Soil: (_ ib (in.)	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Vater-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

	ase):			Field	age Class: Observations wnfirm Mapped Type? Yes	No
	<u>rtion</u> : orizon /B	Matrix Color ( <u>Munseli Moist)</u> <u>10YK 3</u> 1	Mattle Colors (Munsell Moist) 7.57.(7/)	Mottle Abundance/Contrast らな	Texture, Concretions, <u>Structure, etc.</u> <u>Silly clay</u>	
Hit Su Aq Re	stosol stic Epipedo Ifidic Odor Juic Moistur Iducing Cor	e Regime		Concretions High Organic Content in Drganic Streaking in Sar Isted on Local Hydric S Isted on National Hydric Dther (Explain in Remar	olis List c Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	666	No No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circ Yes	
Remarks:						

Approved by HQUSACE 3/92

Wetland 217

upland data point Pr-WOILI UPL

Project/Site: <u>GCavga</u>	Date: <u>518107</u>	
Applicant/Owner: <u>Fi-sF Energ</u>	County: <u>600099</u>	
Investigator: <u>ML, LB</u>	State: <u>CN</u>	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No Yes No	Community ID : Transect ID: Plot ID:

#### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Unknown grass 2. Fragania virgiana	Heb -	9	
2. Fragana virgiana	Hrib UPL	10	
3. Malus malus	Tree UPL	11,	
4		12	
5		13	<u></u>
6		14	
7		15	
8		16	
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	_03	
Remarks;			

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations: Depth of Surface Water: <u> かるかと (</u> in.)	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit: <u>トロール (</u> in.) Depth to Saturated Soil: <u>ハットル (</u> in.)	Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks;	

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes N	
Profile De Depth (inches) X-1)	scription: Horizon B	Matrix Color ( <u>Munsell Moist)</u> <u>169 R 3/1</u> <u>2.5 Y (/y</u>	Mottle Calors (Munsell Moist) 7.5 YR 7/7 2.5 Y - C/8	Mottle <u>Abundance/Contrast</u> <u>SZ</u> <u>SZ</u>	Texture, Concretions, <u>Structure, etc.</u> <u>SIHyclay</u> <u>SIHyclay</u> <u>SIL; Clay</u>	
Hydric Soil	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistu _ Reducing Co	re Regime		Concretions tigh Organic Content in Organic Streaking in Sar isted on Local Hydric S isted on National Hydric Other (Explain in Remar	ioils List c Soils List	

.

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	<u>A</u>	No No No	(Circle)	(Circle) Is this Sampling Point Within a Wetland? Yes No
Remarks:				
		<del></del>		Anorowed by HOUSACE 3/92

Wetland 219

Pr-wols

Project/Site: <u>MuddleFreld</u>	Date: <u>5/9/0)</u>	
Applicant/Owner: <u>First Energy</u>	County: <u>Ccausa</u>	
Investigator: <u>ML</u> LB	State: <u>0</u> H	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : <u>PFm/PFo</u> Transect ID: Plot ID:

## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Impatrons capensis	Herb FACW	9	
2. Viburnum dentation	shrub FAC	10	
s. Onclea sensibilis	Herb FACW	11	
4. Ulmus americana	THE FACW	12	
5		13	
6	<u> </u>	14	
7		15	
8	<del></del>	16	
Percent of Dominant Species tha (excluding FAC-).	t are OBL, FACW or FAC	1009,	
Remarks:	······································		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

# HYDROLOGY

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:         Depth of Surface Water:      O(in.)         Depth to Free Water in Pit:      (in.)         Depth to Saturated Soil:      (in.)	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

.

	i Phase):	·····		Field	age Class: Observations onfirm Mapped Type? Yes No
Profile De Depth (inches) 1-4 (	A B	Matrix Color (Munsell_Moist) [0484/1 ]04861]	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> S:Hz loam <u>BIHZ clay</u>
	_ Histosol _ Histic Epipeo _ Sulfidic Odol _ Aquic Moistu _ Reducing Co	r re Regime		Concretions High Organic Content in Organic Streaking in Sau isted on Local Hydric S Isted on National Hydri Other (Explain in Remar	oils List c Soils List
Remarks;		· .			

# WETLAND DETERMINATION

Hydrophytic Veg Wetland Hydrolo Hydric Soils Pres	gy Present?	<u> </u>	No (( No No	Circle)	Is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:	Se para t L	ted (vi vetlan	m (v. -d 16	ethand chr	17 by dry frace row y top of a slope	
					Anorma	ed by HOUSACE 3/92

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Upland Site to Wettand 219

Pr-wols UPL

Project/Site: <u>Muddle Field</u> Applicant/Owner: <u>First Energy</u> Investigator: <u>ML, LB</u>			Date: <u>SIGIO)</u> County: <u>Deauys</u> State: <u>OH</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes	NO ROS	Community ID : Transect ID: Plot ID:

## VEGETATION

Upland Young Missie Handwind Farest

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator	
1. Fragaria Virginian	Hrib FACU	9	<u></u>	
2. Viburnum dentatum	Shrub FACW	10		
3. Rubous sp	Hed -	11		
4. Toxicultudoron radium	Hris FAC	12		
5. Fraxinus americana	Tre FACU	13		
6. Prunus stratina	The FACU	14		
7	(	15	<b></b>	
8		16		
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	<u> 303</u>		
Remarks:		·		

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines		
Field Observations:         Depth of Surface Water:       h m (in.)         Depth to Free Water in Pit:       h m (in.)         Depth to Saturated Soil:       inm (in.)	Drift Lines     Sediment Deposits     Drainage Patterns in Wetlands     Secondary Indicators (2 or more required):     Oxidized Root Channels in Upper 12"     Water-Stained Leaves     Local Soil Survey Data     FAC-Neutral Test     Other (Explain In Remarks)		
Remarks:			

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes	No
Profile De Depth (inches) I ~I O	scription: Horizon A/B	Matrix Color (Munsell Moist) 16 Y R 413	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc. S.I.F. Clay	
			······································			
	 I Indicators: Histosol Histic Epiped			Concretions	Sunfa ce Layer Sandy Soils	
	Sulfidic Odor Aquic Moistu Reducing Co	re Regime		Ignoric Streaking in Sar isted on Local Hydric S isted on National Hydric Other (Explain in Remar	ndy Soils oils List c Soils List	
Remarks:						

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Prèsent? Hydric Soils Present?	Yes Yes Yes	NO 100	(Circle)	(Circle) Is this Sampling Point Within a Wetland? Yes No
Remarks:				
				Approved by HOI ISACE 3/02

Pr-WUG W-216

Sciub-shub-Emergent-Ferster

Project/Site: <u>Knidal-firl</u> Applicant/Owner: <u>First Energy</u> Investigator. <u>m.L. L.R</u>		Date: $5/8/07$ County: <u>Geauga</u> State: <u>OH</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : PSS/PEA Transect ID: Plot ID:

## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant_Plant_Species	Stratum Indicator
1. Viburnum dentatum	Shrub FAC	9	
2. Onoclea sensibilis	Herb OBL	10	
3. Impatiens capensis	Herb FACU	11	
4. Ulmus ampricana	Tre FACW	12	
5		13	
6		14	
7		15	
8		16	
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	1002	· · · · · · · · · · · · · · · · · · ·
Remarks:			······································

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetiand hydrology Indicators: Primary Indicators: Inundated Seturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:Depth of Surface Water: $O = \frac{1}{2} \ln (in.)$ Depth to Free Water in Pit: $O = 6 (in.)$ Depth to Saturated Soil: $3 \ln (in.)$	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

	l Phase):	·····		Field	age Class: Observations onfirm Mapped Type? Yes No
Profile Des Depth (inches)  •12 in	acription: Horizon A:/J	Matrix Color ( <u>Munsell_Moist)</u> _(0YR <u>3//</u>	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, <u>Structure, etc.</u> .Silty Clary
Hydric Soil	_ Histosol			Concretions	
	Reducing C	or Iure Regime		High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydrik Dither (Explain in Remark	oils List c Soils List
Remarks:					

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	666	No No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:				· · · ·	
				•	

Approved by HQUSACE 3/92

upland data shret For w-214 Pr-wold up

Project/Site: <u>Geauga</u> Applicant/Owner: <u>hrst Enrogy</u> Investigator: <u>mL_L.B</u>			Date: <u>S/8107</u> County: <u>Geausa</u> State: <u>Ol</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes	No MO MO	Community ID : Transect ID: Plot ID:

## VEGETATION

Young upland Messi Handwood Forst

		ominant Plant Species	Stratum	Indicator
1. Prunus serotina Tree				
2 Acer Fubrum Tree	FAC 10.	·		
3. Toxico dondrom radicans Herb	FAC 11.	······································		
4. Erypronuin americanum Heab 1	UPL 12.	·	<del></del>	
5	13.	·		
6	14,	······		
7	15,			
8	16,	······································		
Percent of Dominant Species that are OBL, FAG (excluding FAC-).	CW or FAC	25%		
Remarks:				

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs	Wetland hydrology Indicators: Primary Indicators: inundated
Other No Recorded Data Available	Saturated in Upper 12 Inches Water Marks
	Drift Lines
Field Observations:	Sediment Deposits Drainage Pattems in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water. <u>Nonく (in.)</u>	Oxidized Root Channels in Upper 12"     Water-Stained Leaves
Depth to Free Water in Pit: <u> かのく</u> (in.)	Local Soil Survey Data
Depth to Saturated Soil: <u>nunx (in.)</u>	FAC-Neutral Test Cher (Explain in Remarks)

	i Phase):			Field Observations			
Profile De           Depth           (inches)           1-3           2-+	scription: Horizon A B 	Matrix Color (Munsell Moist) 10784/3 Mack	Mottle Colors ( <u>Munsell Moist)</u>	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Sitty Clay</u>		
	Hydric Soil Indicators:      Concretions        Histosol      Concretions        Histic Epipedon      High Organic Content in Surface Layer Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Aquic Moisture Regime      Listed on Local Hydric Soils List        Reducing Conditions      Listed on National Hydric Soils List        Other (Explain in Remarks)      Other (Explain in Remarks)						

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	(Circle)	(Circle) Is this Sampling Point Within a Wetland? Yes No
Remarks:			
			Approved by HQUSACE 3/92

Pr-w017

W-216

Scrub-shrub-Emergent-Fers

Project/Site: Mudal-firl	Date: <u>5/8/07</u>	
Applicant/Owner: First Energy	County: <u>Geauga</u>	
Investigator: ML, J.B	State: <u>OH</u>	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : PSS/PEM Transect ID: Plot ID:

## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator			
1. Viburnum dentatum	Shrub FAC	9				
2 Ohodra sensibilis	HENS OBL	10				
3. Impations caprovis	Heib FACU	11				
4. Ulmus americana	Tre FACW	12				
5		13				
6		14	_ <del></del>			
7	·····	15				
8		16				
Percent of Dominant Species that (excluding FAC-).	t are OBL, FACW or FAC	100%				
Remarks:						

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Seturated in Upper 12 Inches Water Marks Drift Lines
Field Observations: Depth of Surface Water: $O = \frac{1}{2} \ln (in.)$ Depth to Free Water in Pit: $O = G (in.)$ Depth to Saturated Soil: $3 \ln (in.)$	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

·

	Phase);		Field	Drainage Class: Field Observations Confirm Mapped Type? Yes No			
Profile Des Depth (inches) [+12 m	A/D	Matrix Color ( <u>Munsell Moist)</u> (0YR3//	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc. .silt, clay		
Hydric Soli Indicators:       Concretions         Histosol       High Organic Content in Surface Layer Sandy Solis         Sulfidic Odor       Organic Streaking in Sandy Soils         Aquic Moisture Regime       Listed on Local Hydric Solis List         Reducing Conditions       Listed on National Hydric Soils List         Gleyed or Low-Chroma Colors       Other (Explain in Remarks)							
Remarks:			u				

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Solls Present?	996	Na No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:				· · · · · · · · · · · · · · · · · · ·	
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Approved by HQUSACE 3/92

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upland data shret For 10-216 Pr-woit UPL

Project/Site: <u>Geauga</u>	Date: <u>5/8(0)</u>		
Applicant/Owner: <u>First Energy</u>	County: <u>Geology</u>		
Investigator: <u>mL</u> , <u>L</u> . <u>B</u>	State: <u>04</u>		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes	NO 89	Community ID : Transect ID: Plot ID:

## VEGETATION

Young up'and Messie Handwood Forst

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Prynus scrating	Tree UPL	9	
2. Acer rubrum	Tre FAC	10	
3. Taxicudendem rudican)	Herb FAC	11	
4. EryAronium americanum	Hrub UPL	12	
5		13	
6		14	
7		15	
8		16	<u> </u>
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	25%	
Remarks:			

## HYDROLOGY

Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines		
Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):		
Oxidized Root Channels in Upper 12"		
Local Soil Survey Data		
Other (Explain in Remarks)		
-		

Remarks:

ł

	/ Phase):		Field	age Class: Observations onfirm Mapped Type? Yes No		
Profile De:           Depth           (inches)           1-3           3-+		Matrix Color (Munsell_Moist) 1078413 Mock	Mottle Colors (Munsell_Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Sitty Clay</u>	
Hydric Soil Indicators:      Concretions        Histosoi      Concretions        Histic Epipedon      High Organic Content in Surface Layer Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Aquic Moisture Regime      Listed on Local Hydric Soils List        Reducing Conditions      Listed on National Hydric Soils List        Gleyed or Low-Chroma Colors      Other (Explain in Remarks)						

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Solls Present?	Yes Y <b>es</b> Yes	(Circle)	(Circle) Is this Sampling Point Within a Wetland? Yes No
Remarks:			
			Approved by HOUSACE 202

proved by HQUSA CE 3/92

Wetland 220 Pr-wolg

Project/Site: <u>Geauga</u> Applicant/Owner: <u>First Energy</u> Investigator: <u>ML, LB</u>	······	Date: <u>SI 9107</u> County: <u>Geauge</u> State: <u>OH</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : <u>PEM/P5</u> S Transect ID: Plot ID: <u>ML-22</u> O

## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Viburnum dentatum	shrub FAC	9	
2. Carnus amonum	Shub FACLU	10	·
3. Onclea Sensibilis	Hrub OBL	11	
4. Juncus effersus	Herb FACW+	12	
s. Grass	Havb -	13	<u> </u>
8. Toxicodrudionradians	Herb FAC	14	<u> </u>
7		15	······
8		16	
Percent of Dominant Species that a (excluding FAC-).	are OBL, FACW or FAC	1003	
Remarks:			

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: 
Field Observations:         Depth of Surface Water: $O - 1$ (in.)         Depth to Free Water in Pit: $O$ (in.)         Depth to Saturated Soil: $O$ (in.)	Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	<u>Ann an an ann an ann an ann an ann an ann an a</u>

	l Phase):			Field	age Class: Observations onfirm Mapped Type? Ye	 96 No	
Profile De Depth (inches) (-\2.	scription: Horizon <u>A/B</u>	Matrix Color ( <u>Munsel[_Moist)</u> <u> 0 Y R 5/]</u>	Mottle Colors (Munsell Moist) \0\1 & L/S	Mottle <u>Abundance/Contrast</u> <u>S</u> ?	Texture, Concretions, <u>Structure, etc.</u> S. H. Clay	-	
	Hydric Soil Indicators:      Concretions        Histosol      Concretions        Histic Epipedon      High Organic Content in Surface Layer Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Aquic Moisture Regime      Listed on Local Hydric Soils List        Gleyed or Low-Chroma Colors      Other (Explain in Remarks)						
Remarks:							

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	666	No No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circ	cie) No
Remarks:				· · · · · · · · · · · · · · · · · · ·		
				Δαρητικ	ad by HC	USACE 3/92

Upland site For Wetland 2.20

Pr-WOIS UPL

Project/Site: <u>Grauga</u>	Date: <u>5/9/67</u>		
Applicant/Owner: <u>First Entrigy</u>	County: <u>Grace a</u>		
Investigator: <u>mL_LA</u>	State: <u>0</u> H		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (if needed, explain on reverse.)	Yes Yes Yes	No No No	Community ID : Transect ID: Plot ID:

## VEGETATION

Young upland Mesic Hardwood

Dominant Plant Species Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Acrirobrom Trez FAC	9	<u> </u>
2. Fraximus americana Trez FACU	10	
3. Erythronium americane Iters UPL	<b>1</b> 1	·····
4	12	
5	13	
6	14	<u> </u>
7	15	
8	16	
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).		
Remarks:		
	······	

Recorded Data (Describe in Remarks); Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water: <u>vort (</u> in.)	Oxidized Root Channels in Upper 12" Water-Stained Leaves
Depth to Free Water in Pit: <u>honc</u> (in.)	Local Soil Survey Data
Depth to Saturated Soil: <u>nome (in.)</u>	Other (Explain in Remarks)
Remarks:	

Map Unit Name (Series and Phase): Taxonomy (Subgroup):			Field (	age Class: Observations onfirm Mapped Type? Yes	No
Profile Description: Depth (Inches) Horizon 1-5 A 3-12 B	Matrix Color (Munsell Moist) 10 Y R 2/2 10 Y KC/2	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u> <u>452(Comm</u> )	Texture, Concretions, <u>Structure, etc.</u> <u>Ioany, Clay</u> Ioany, Clay	
Reducing (	or ture Regime		Concretions High Organic Content in Organic Streaking in Sar isted on Local Hydric Se isted on National Hydric Other (Explain in Remark	pils List : Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	638)	(Circle)	Is this Sampling Point Within a Wetland?	(Circle) Yes (NG)
Remarks:					
	-	•			

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Approved by HQUSACE 3/92

Pr-wola Wetland-221

Project/Site:	Date: S.967 County: Scause State: OH		
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes	20 20 20	Community ID : <u>PSSIPEP</u> Transect ID: Plot ID:

### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Impotion capensis	Hob FACO	9	<u> </u>
2. Viburnin dentation	Shrub FAC	10	
3. Rosa palustris	Hrus OBL	11	
4. Onedec sensibilis	Heib FACW	12	<u> </u>
5. Connus amonum	Hero FACW	13	
6		14	
7		15 !	
8		16	
Percent of Dominant Species the (excluding FAC-).	at are OBL, FACW or FAC	105%	
Remarks:		••••••••••••••••••••••••••••••••••••••	
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# HYDROLOGY

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Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:         Depth of Surface Water:         Depth to Free Water in Pit:         1 to Free Water in Pit:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12° Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

	l Phase):			Field	age Class: Observations onfirm Mapped Type? Yes No
Profile Der Depth (inches) (- 4 4-12	scription: Horizon /A B	Matrix Color (Munsell Moist) 10483/2 10485/1	Mottle Colors (Munsell Moist) LoYR C/8	Mottie Abundance/Contrast	Texture, Concretions, <u>Structure, etc.</u> <u>Ioam</u> <u>Sitty clay</u>
Hydric Soll	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistur _ Reducing Co	re Regime		Concretions High Organic Content in Drganic Streaking in Sar Listed on Local Hydric S Listed on National Hydri Other (Explain in Remar	ioilis List c Soils List

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Solls Present?	<b>BBB</b>	No No No	(Circle)	is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:					

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upland point to w-221

Pr-wolg UPL

Project/Site:	Date: <u>5[9]07</u> County: <u>Geausa</u> State: <u>0</u> H	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : Transect ID: Plot ID:

## VEGETATION

Young Upland Mesic Handwood Forent

Dominant Plant Species Stratum Indicator	Dominant Plant Species	Stratum Indicator			
1. Viburnum dentatum Shrub FAC	9				
2. Erythromum concreamen Herb UPL	10				
3. Acri rubrum Tre FAC	11	·			
4. Prunes smoting Tree FACU	12	<u></u>			
5. Solidaso canadrass Hrub FACU	13				
6	14				
7	15				
8	16				
Percent of Dominant Species that are OBL, FACW or FAC					
Remarks:					

Recorded Data (Describe in Remarks):     Stream, Lake, or Tide Gauge     Aerial Photographs     Other     No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Secondary Indicators (2 or more required):
Depth of Surface Water(in.)	Oxidized Root Channels in Upper 12"     Water-Stained Leaves
Depth to Free Water in Pit <u>hema</u> (in.)	Local Soil Survey Data
Depth to Saturated Soil: hme_(in.)	Other (Explain in Remarks)

	! Phase):			Field	age Class: Observations onfirm Mapped Type? Yes No
	scription: Horizon B B	Matrix Color (Munsell Moist) 1048413 2.54 613	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, Structure, etc. Clay loom Clay loom
Hydric Soil	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistu _ Reducing Co	re Regime		Concretions High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydri Other (Explain in Remar	ioils List c Soils List

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	(Circle)	Is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:				
			Аррточе	d by HQUSACE 3/92

Wetland 222 Pr-WODO

Project/Site: <u>Incld[zfivid</u> Applicant/Owner: <u>First Enersy</u> Investigator: <u>ML L []</u>		: <u>८१</u> ९७ nty: <u>७९२०</u> e: <u>०</u> म	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes N Yes N Yes N	o Trar	nmunity ID : <u>PS/PF</u> nsect ID: ID:

## VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator			
1. Nyssa sylvatica	Try FAC	9	·			
2. Vilournum drutatim	shub FAC	10				
3. Carex Sb 4. Counus amonum	H-B -	11				
4. Cornus amonum	Shrub FAC	t2				
5	<b></b>	13				
6		14				
7		15,				
8		16				
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).						
Remarks:	Remarks:					

## HYDROLOGY

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Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Field Observations:	
Depth of Surface Water:(in.)	Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit:(in.)	Local Soil Survey Data
Depth to Saturated Soit:(in.)	Other (Explain in Remarks)

wetland 222

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(Series and	Map Unit Name					
Profile De Depth (inches) [-12	<u>scription</u> : <u>Horizon</u> A/B	Matrix Color ( <u>Munsell_Moist)</u> 	Mottie Colors (Munsell Moist) (0YR7/7	Mottle Abundance/Contrast 」つう。	Texture, Concretions, Structure, etc. Silty Clay	
Hydric Soil Indicators:      Concretions        Histosol      Concretions        Histic Epipedon      High Organic Content in Surface Layer Sandy Soils        Sulfidic Odor      Organic Streaking in Sandy Soils        Aquic Moisture Regime      Listed on Local Hydric Soils List        Gleyed or Low-Chroma Colors      Other (Explain in Remarks)						
Remarks:		on eda	je of wetl	and		

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Solls Present?	893	No No No	(Circle)	(Circle) Is this Sampling Point Within a Wetland?
Remarks:				
				Approved by HQUSACE 3/92

Pr-wodo UPL

Upland point for Wethand 222

Project/Site: <u>Muddlefield</u> Applicant/Owner: <u>First Energy</u> Investigator: <u>NLLD</u>	`	Date: <u>\$/9/0</u> County: <u>5 cauga</u> State: <u>0H</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	2000	Community ID : Transect ID: Plot ID:
VEGETATION	You	ng Oisturioral Forest

# VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum	Indicator
1. Malus Malus	Tre UPL	9		
2. Crataegussp	Shub FACU	10		
3. Fraxinus amonica	Shrub FACU	11		
4. Erythronium americanun	Hrob UPL	12		
5		13	<u></u>	
6		14		. <u> </u>
7		15	<u> </u>	
8		16	<u> </u>	
Percent of Dominant Species that a (excluding FAC-).	are OBL, FACW or FAC			
Remarks:				

Field Observations:	2 Inches
Depth of Surface Water: <u>Vonc</u> (in.) Oxidized Root Chann Water-Stained Leave	Wetlands
	iels in Upper 12"
Depth to Free Water in Pit:(in.)Local Soil Survey Da FAC-Neutral Test	
Depth to Saturated Soil: <u>none(in.)</u> Other (Explain in Re	narks)

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes I	 No
Profile De Depth (inches) / -/ 4	scription: Horizon A/B	Matrix Color (Munsell Moist) <u>10484/3</u> <u>rock</u>	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Silly loam</u>	
	Histosol Histosol Sulfidic Odd Aquic Moisti Reducing C Gleyed or La	n u <b>re</b> Regime		Concretions High Organic Content in Organic Streaking in Sar Isted on Local Hydric S Isted on National Hydric Other (Explain in Remar	olis List c Soils List	

#### WETLAND DETERMINATION

Remarks:	Hydrophytic Vegetation Present? Wetland Hydrology Prèsent? Hydric Soils Present?	Yes Yes Yes	No (Cirde) No No	Is this Sampling Point Within a Wetland?	(Circie) Yes No
	Remarks:				

Approved by HQUSACE 3/92

Pr-w021 Wetland 222

Project/Site:		Date: <u>S1910</u> County: <u>Scausa</u> State: <u>04</u>	
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes N Yes N	ło	Community ID : <u>P\$5/PF</u> 5 Transect ID: Plot ID:

# VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Nyssa sylvatica	Tre FAC	9	
2. Vilournum deutzitum	shub FAC	10	
3 Carrex Sp	H+15 -	11	
4. Cornus amonum	Shrub FAC	12	
5		13	
6		14	
7		15	
8		16	
Percent of Dominant Species that (excluding FAC-).	at are OBL, FACW or FAC	1009	
Rømarks:			

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sectiment Deposits Drainage Patterns in Wetlands
Depth of Surface Water:(in.)	Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12"
Depth to Free Water in Pit:(in.)	Water-Stained Leaves
Depth to Saturated Soil:(in.)	FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

wetland 222

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 C II	11	а.

•	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes No	-
Profile De Depth <u>(inches)</u> ]-12	scription: Horizon A/B	Matrix Color ( <u>Munsell Moist)</u> [0]RS[]	Mottle Colors ( <u>Munsell Moist)</u> (ひYR7/>	Mottie <u>Abundance/Contrast</u> 10 <b>7,</b>	Texture, Concretions, Structure, etc. Silly Clay	
	Histosol			Concretions	Surfa ce Layer Sandy Soils	
	Sulfidic Odor Aquic Moistu Reducing Co	r Ire Regime		Drganic Streaking in Sar isted on Local Hydric S isted on National Hydric Other (Explain in Remar	ndy Soils oils List c Soils List	
Remarks:		On eda	ir of weth	land		

### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	666 66	No No No	(Circle)	(Circle) Is this Sampling Point Within a Wetland?
Remarks:		****		-

Approved by HQUSACE 3/92

Pr-WODI UPL Upland point for Wothand 222

Project/Site: <u>Muddlefield</u> Applicant/Owner: <u>First Entroy</u> Investigator: <u>ML, LB</u>		Date: <u>5/9/0</u> County: <u>5 cauga</u> State: <u>0</u> H
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)		Community ID : Transect ID: Plot ID:
VEGETATION	Ус	oung Disturbed Forest

#### Dominant Plant Species Stratum Indicator Dominant Plant Species Stratum Indicator Tre UPL majus malus 9.\_\_\_\_\_ (ratagussy Shind FACU 10.\_\_\_\_\_ Fraxinus american Shrub FACU 11.\_\_\_\_\_ Erythronium americanun Hrob UPL 12.\_\_\_\_\_ \_\_\_\_ 13\_\_\_\_\_ 14.\_\_\_\_\_ \_\_\_\_\_ 15.\_\_ 16. Percent of Dominant Species that are OBL, FACW or FAC 03 (excluding FAC-). Remarks:

Recorded Data (Describe in Remarks Stream, Lake, or Tide Gaug Aerial Photographs Other No Recorded Data Available	
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water: <u>N</u> or	<u>Augustication</u> <u>Cycle Augustication</u> <u>Cycle Augusticatio</u>
Depth to Free Water in Pit:	<u>     Local Soll Survey Data</u> FAC-Neutral Test
Depth to Saturated Soil:	Other (Explain in Remarks)
Remarks:	

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes	No
Profile De Depth (inches) / -/ 4	scription: <u>Horizon</u> <u>A/B</u>	Matrix Color ( <u>Munsell Moist)</u> <u>104R4/3</u> <u>rock</u>	Mottle Colors (Munsel) Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Silly loam</u>	
	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistur _ Reducing Col	re Regime		Concretions ligh Organic Content in Organic Streaking in Sar isted on Local Hydric S isted on National Hydric Other (Explain in Remar	oils List c Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	No No No	Is this Sampling Point Within a Wetland?	(Circle) Yes (No)
Remarks:			<u> </u>	
				the HOUSACE 3/92

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Wetland 222 Pr-WODD

Project/Site:			Date: <u>SI910</u> County: <u>Geause</u> State: <u>OH</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes Yes	No No No	Community ID : <u>PS/PF</u> Transect ID: Plot ID:

### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Nyssa sylvatica	Tru FAC	9	
2. Vilournum christian	shub FAK	10	
3 Carox 56 4. Cornus amonum	H-15 -	11	
	Shrub FAC	12	
5		13	
6	<u> </u>	14	·····
7		15	
8		18	•
Percent of Dominant Species that (excluding FAC-).	at are OBL, FACW or FAC	1009,	
Remarks:			

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:         Depth of Surface Water:       1 is	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain In Remarks)
Remarks:	

	d Phase):			Field	nage Class: Observations onfirm Mapped Type? Yes	a No
Profile De Depth (inches) /-12	A/B	Matrix Color ( <u>Munsell_Moist)</u> 	Mottle Colors (Munsell Moist) 107R7/7	Mottle <u>Abundance/Contrast</u> 	Texture, Concretions, <u>Structure. etc.</u> 5,1kg Clay	
	Indicators: Histosol Histic Epiped Sulfidic Odor Aquic Moistu Reducing Co	re Regime		Concretions ligh Organic Content in Organic Streaking in Sa isted on Local Hydric 3 isted on National Hydr Other (Explain in Rema	Solis List ic Soils List	
Remarks:			je of wet		·····	

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Présent? Hydric Solls Present?	<u>E</u>	No No No	(Circle)	(Circle) is this Sampling Point Within a Wetland?
Remarks:				-
				Approved by HQUSACE 3/92

Pr-WODD UPL Upland point for Wothland 222

Do Normal Circumstances Exist on the site? Yes No Community ID :	Project/Site: <u>Middlefie</u> Applicant/Owner: <u>First</u> Investigator: <u>Middlefie</u>	Enrry		Date: <u>S/9/0</u> County: <u>Stavgg</u> State: <u>Ot</u>
Young Disterated Firet	Is the site significantly distuits the area a potential Prob	bed (Atypical Situation)? em Area?	Yes No Yes No Yes No	Transect ID:
EGETATION COLOR	/EGETATION		Ya Ya	oung Disturbed Forest

		10.00.0
1. Malus Malus Thre UPL	9	
2 Crataegus Sp Shub FACU	10	
3 Fraxinus american Shrub PACU	11	
4. Erythronium amoricaning Hrub UPL	12	
5	13	
6	14	
7	15	
8		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).		
Remarks:	· · · · · · · · · · · · · · · · · · ·	

Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:         Depth of Surface Water:         Depth to Free Water in Pit:         Depth to Saturated Soil:	Sediment Deposits         Drainage Patterns in Wetlands         Secondary Indicators (2 or more required):         Oxidized Root Channels in Upper 12"         Water-Stained Leaves         Local Soil Survey Data         FAC-Neutral Test         Other (Explain in Remarks)
Remarks:	

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes	No
Profile De Depth (inches) (1-14)	scription: Herizon A/B	Matrix Color ( <u>Munsell Moist)</u> <u>10984/3</u> <u>rock</u>	Mottle Colors ( <u>Munsell Moist)</u>	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, <u>Structure, etc.</u> <u>Silly loam</u>	
Hydric Soil	_ Histosol _ Histic Epipeo _ Sulfidic Odo _ Aquic Moistu _ Reducing Co	r ire Regime		Concretions High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydric Other (Explain in Remar	ioils List c Soils List	
	· .					

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	No) (Circle) No No	Is this Sampling Point Within a Wetland?	(Circle) Yes No
Remarks:			* <u> </u>	
			Approve	d by HQUSACE 3/92

Wetland 223 Pr. w023

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Project/Site: <u>Middlefield</u> Applicant/Owner: <u>First Enersy</u> Investigator: <u>Middlefield</u>		Date: <u>519/67</u> County: <u>Gravsa</u> State: <u>04</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No	Community ID : <u>PSS</u> Transect ID; Plot ID:

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### VEGETATION

Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum	Indicator
1. Viburnum dentatum	Shrub FAC	9		
2. Impatien, capensis	H-15 FACW	10		
3. Onochea stassibilis	HIJ FACW	11	. <u></u>	
4. Salix sp	Shires -	12	. <u> </u>	
5		13		
6		14		
7	<u> </u>	15		
8		16		<u> </u>
Percent of Dominant Species that (excluding FAC-).	are OBL, FACW or FAC	10093		
Remarks:				

#### HYDROLOGY

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Recorded Data (Describe in Remarks):    Stream, Lake, or Tide Gauge    Aerial Photographs    Other    No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: 
Field Observations:         Depth of Surface Water: $1 \text{ h}$ (in.)         Depth to Free Water in Pit: $\mathcal{O}$ (in.)         Depth to Saturated Soil: $\mathcal{O}$ (in.)	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12" Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)
Remarks:	

	2 Phase):			Field	age Class: Observations wfirm Mapped Type? Yes	No
Profile De Depth (inches)  -12_	<u>Horizon</u> <u>AIB</u>	Matrix Color (Munsell Moist) 10 Y R 3/1	Mottle Colors (Munsell Moist)	Mottle <u>Abundance/Contrast</u>	Texture, Concretions, Structure, etc. 5,//	
	_ Histosol _ Histic Epiped _ Sulfidic Odor _ Aquic Moistu _ Reducing Co	re Regime		Concretions High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydric Other (Explain in Remar	olis List : Soils List	

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	No No No	(Circle)	Is this Sampling Point Within a Wetland?	(Circ	ie) No
Remarks:			• • • • • • • • • • • • • • • • • • •		

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Upland Data point for Wetland-223 Pr-WODB UPL

Project/Site: <u>Muddlefield</u> Applicant/Owner: <u>First Entray</u> Investigator: <u>ML. LB</u>		Date: <u>5/9/07</u> County: <u>Geauga</u> State: <u>0N</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes No Yes No Yes No	Community ID : Transect ID: Plot ID:

# VEGETATION

Young Upland	Disturbed Forest
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Dominant Plant Species	Stratum Indicator	Dominant Plant Species	Stratum Indicator
1. Frakinus americana	THE FACE	9	
2 Cornus Florida	Tma FACU-	10	
3. Populus Tremulardes	Tre FACU	11	
4. Robussp	Herb -	12	
5. Tussilago Farter	Herb FACU	13	
6. TCX 1 Codrin dram radican	HI-16 FAC	14	
7		15	
8		16	
Percent of Dominant Species that (excluding FAC-),	are OBL, FACW or FAC	· · · · · · · · · · · · · · · · · · ·	
Remarks:		<u> </u>	
<u></u>			

Recorded Data (Describe in Remarks); Stream, Lake, or Tide Gauge Aerial Photographs Other No Recorded Data Available	Wetland hydrology Indicators: Primary Indicators: Inundated Saturated in Upper 12 Inches Water Marks Drift Lines
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):
Depth of Surface Water: <u>h(me_(in.)</u>	Oxidized Root Channels in Upper 12" Water-Stained Leaves
Depth to Free Water in Pit:(in.)	Local Soil Survey Data FAC-Neutral Test
Depth to Saturated Soil: <u>hube (in.)</u>	Other (Explain in Remarks)
Remarks:	

	d Phase):			Field	age Class: Observations onfirm Mapped Type? Yes No
Profile De Depth (Inches) 5 5-1)	scription: Horizon A VS	Matrix Color (Munsell Moist) 104 R 4/3 104 R 5/4	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, <u>Structure, etc.</u> <u>Silty locm</u> <u>Sitty locm</u>
				· · · · · · · · · · · · · · · · ·	
	Indicators: Histosol Histic Epiped Sulfidic Odor Aquic Moistu Reducing Co Gleyed or Lo	re Regime		Concretions High Organic Content in Organic Streaking in Sar Listed on Local Hydric S Listed on National Hydrik Other (Explain in Remar	oils List c Solls List
Remarks:					

# WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes Yes Yes	No (Circle)	Is this Sampling Point Within a Wetland?	(Circ Yes	ie) ( <sup>1</sup> 0)
Remarks:					
			Approve	d by HQ	USACE 3/92

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	Percent of Dominant Species that are OBL. FACW or FAC (excluding FAC-) Hydrophytic Vegetation Present? (es No REMARKS:	VEGETATION Dominant Plant Species 1 Splix nigra 2 Loras Amonimum 3 Vibaraum Alicegaitetua 4 Ribes Americana 5 Vitis Acestivelis 5 Vitis Acestivelis 6 Taxico dendran Vitelans 7 Rosa palunteis 8 Cely corre stricte 9 Impetions capensis 9 Impetions capensis	ROUTINE WETLAND DETERMINATION-DATA FORM         Project/Site:       M. ddle S. e.ld       Colspan="2">Colspan="2">Colspan="2">Colspan="2"         Applicant/Owner:       CTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
	RC	Stratum Indicator T/S Facut S Facut S Facut NV Facut UV Facut H Facut H Facut H Facut H Facut	1987 MANU
WETLAND DETERMINATION Hydrophylic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present? REMARKS	WHYDRIC SOIL INDICATORS       Histosol       Histosol       Histo Expedion       Suilide Odon       Aquic Mosture Reprint       High Organic Streak of in Streak       Hydric Soil Present       Year       No.	Image: Solution     Pand     0.24 Solution       Map Unit Name (Series and Phase)     Image: Series and Phase)       Image: Series and Phase)     Image: Subgroup):       Image: Series and Phase)     Image: Series and Phase)       Image: Series and Phase and Ph	AL       HYDROLOGY         RECORDED DATA (Describe in Remarks):         Aerial Pholographs         Other         None Available         FIELD OBSERVATIONS:         Depth of Surface Water in Pit:(in.)         Depth to Free Water in Pit:(in.)         Depth to Saturated Soil:(in.)         Depth to Saturated Soil:(in.)         Wetland Hydrology Present?         NO         REMARKS
No Is this sampling point a Wetland" No No	Rentitions Organic Streaking in Sawty Sol- Geleyed or Low Chroma Colors Disted on Local Hydric Sols List Concretions Distributions National Hydric Sols L High Organic Streak of In Schatter Even in Sandy Sols No.	Drainage Class: Field Observations Confirm Mapped Type: Yes No Mottle Texture Noticians Structure.etc.	PRIMARY Indicators: Inundated Saturated in Upper 12" Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wellands SECONDARY Indicators SECONDARY Indicators Mater Stained Root Channels in UPPER 12" Water Stained leaves Local Soil Survey Data FAC-Neutrat Test Other (Explain in Remarks)

**1987 MANUAL ROUTINE WETLAND DETERMINATION-DATA FORM** 

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Project/Site:				
Applicant/Owner				SUES
Investigator(s)				
Date'	- Community ID			
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Do Normal Circumstances exist on the site?	on the ste?			
Is the site significantly & recently disturbed Wyphial Situation	r disturbet?//ypa.ad	Situation	;	
Is the area all potential Problem Area? (Explain in $\ell$ right remarks)	لافقال الإلالكالمان والا	الالمعالية	.* :	
VEGETATION			•	
Dominant Plant Species		Stratum	<u>Indicator</u>	
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Hydrophytic Vegetation Present<sup>®</sup> Yes

REMARKS.

Percent of Dominant Spenies that are OBL\_FACW or FAC (excluding FAC).

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	ROUTINE WETLAND DETERMINATION-DATA FORM       1987 MANUAL         Project/Site       F.C. 14       Ender for Manual         Applicant/Owner:       F.C. 14       Ender for Manual         Date       f.C. 14       Ender for Manual         County:       Get for Manual       For Manual         County:       Get for Manual       For Manual         State       Ott       Plot 10       Rever for Manual         VEGETATION       Transaction       vs       vs         Pominant Plant Species       Manual       Indicator         1       Consection       Tot       Facu         2       Rever for Consection       Tot       Facu         3       Consection       Tot       Facu         4       Consection       Tot       Facu         5       Tot       Consection       Facu         6       Consection       Tot       Got         7       Co	
WETLAND DETERMINATION Hydrophylic Vegetalion Present? Yes in Is this sampling point a Wetland' Wetland Hydrology Present? Yes in	HYDROLOGY       RECORDED DATA (Describe in Remarks):       FRIMARY Indicators         Berton Conternation       Innurdiated         Chee       Saturated in Upper 12°         Depth of Surface Water       Innurdiated         Depth of Surface Water       Innurdiated         Ves       Innurdiated         Ves       Innurdiated         Ves       Innurdiate         Solls       Definitions         Map Unit Name       Drainage Paterns in Wellands         Ves       Innurdiate         Solls       Drainage Paterns in Wellands         Mapped Type:       Fac. Neutral Test         Sollar       Mapped Type:         Taxonomy (Subgroup):       Maine         Mapped Type:       Yes         Mapped Type:       None         Mapped Type:       None         Indicks       Innurates Confirm         Mapped Type:       None         Indicks       Innura	

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**1987 MANUAL** ROUTINE WETLAND DETERMINATION-DATA FORM .

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Applicant-Owner:			S.B.E.S.
Investigatoris)			
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Is the site significantly & recently disturbed/hAtynical Situations	oet?⊡Atyncal Situatoro	e ÷	
is the area all potential Problem Area? (Explanation final remarks)	Explain in final remarks)	т. Т.	
VEGETATION		· · · · · ·	:
<u>vominant Plant Species</u>	Stratum	Indicator	
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3			HYDRIC SOIL INDICATORS
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Percent of Dominant Species that are OBL FACW or FAC (excluding FAC).	annan vien er er " men de vien e		

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Hydrophytic Vegetation Present? Yes

**REMARKS**:

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	Percent of Dominant Species that are OBL. FACW or FAC (excluding FAC-) Hydrophylic Vegetation Present? CEP NO REMARKS Hydrone to Wething R.S. w-003	ROUTINE WETLAND DETERMINATION-DATA FORM       1987 MANUAL         Project/Sile       M. delle       Sector       Sector         Applicant/Owner:       Erste       Energy       Investigator(s):       Energy         Date:       Erste       Erste       Energy       Investigator(s):       Energy         Date:       Erste       Community       ID       Energy       Investigator(s):         State       OH       Plot ID       Energy       NO         State       OH       Plot ID       Energy       NO         Is the site significantly & recently disturbed?(Atypical Situation)       YES       NO         Is the area a potential Problem Area? (Explain in final remarks)       YES       NO         VEGETATION       VEGETATION       Stratum       Indicator         1       Mbsrnuer, recogner, ture       Stratum       Indicator         2       Safter, not stratus       Stratum       Indicator         3       Logres, stratus       Stratu       H       OBL         4       City user, stratus       H       OBL       OBL         5       Law patriers       City user, stratus       H       OBL         6       Carey       Law patrie
WETLAND DETERMINATION Hydrophytic Vegelalion Present? Welland Hydrology Present? Hydric Soils Present? REMARKS	HYDRIC SOIL INDICATORS	HYDROLOGY         RECORDED DATA (Describe in Remarks):         Parial Pholographs         Other         None Available         FIELD OBSERVATIONS:         Depth of Surface Water in Pit:         Depth to Free Water in Pit:         Depth to Saturated Soil:         Depth to Saturated Soil:         Depth to Saturated Soil:         Wetland Hydrology Present?         Osteries and Phase)         SoilLS         Map Unit Name (Subgroup):         SoilLE DESCRIPTION         Depth functions and Phase)         Taxonomy (Subgroup):         Matrix Color         Monitie Marine Color         Monities         Horizon         Matrix Color         Monitie         Monitie         Marine Color         Manities         Matrix Color         Monitie         Monitie         Monitie         Monitie         Monitie         Monitie         Monitie
No Is this sampling point a Wetland" No No	Hons Organic Streaking in Sandy Soil- Chroma Colors III Listed on Local Hydric Soils List III Listed on Valional Hydric Soils List Hydriver Sandy Soils	PRIMARY Indicators:          Inundated         Inundated         Saturated in Upper 12*         Water Marks         Drift Lines         SeconDARY Indicators         Oxidized Root Channets in UPPER 12*         Water Stained leaves         Local Soil Survey Data         FAC-Neutral Test         Other (Explain in Remarks)         Field Observations Confirm         Mapped Type: Yes         Mature         Texture         Abundance/Centrast

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