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**UTICA EAST – HARRISON HUB FACILITY PHASE II**

**INVESTIGATION OF WATERS OF THE UNITED STATES**

**Utica East Ohio Midstream, LLC**

**November 15, 2012**

Engineers

Surveyors

Planners

Scientists



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## 1.0 INTRODUCTION

A routine delineation of Waters of the United States, including streams and wetlands, has been conducted and a report prepared by EMH&T for the 249.5 acre subject property located approximately 1 mile west of the town of Scio in North Township, Harrison County, Ohio. This study was performed at the request of and is for the exclusive use of Utica East Ohio Midstream LLC. An official Jurisdictional Determination (JD) is warranted for this project, since the project area contains potentially jurisdictional streams and potentially jurisdictional wetlands.

*Potential wetlands located on non-agricultural lands are identified using the 1987 Wetland Delineation Manual (Environmental Laboratory, 1987) for confirmation by the U.S. Army Corps of Engineers (USACE). Impacts to waters and wetlands are regulated by the USACE and the U.S. Environmental Protection Agency (EPA) through Section 404 of the Clean Water Act (33 U.S.C. 1344). In addition, prior to federal authorization for impacts to waters or wetlands, certification must first be obtained from the State as defined in Section 401 of the Clean Water Act (33 U.S.C. 1341). Waters of the United States incorporates coastal waters, navigable inland waters; such as lakes, rivers and streams, tributaries to navigable waters and associated adjacent wetlands, and isolated lakes, wetlands, and intermittent streams (Environmental Laboratory, 1987).*

Potential Waters of the United States, including wetlands, can be identified and delineated in accordance with the June 26, 2008 Regulatory Guidance Letter No. 08-02 issued by the USACE, provided that the all wetlands or streams on the site are jurisdictional. This letter was issued by the agency in order to allow the USACE to issue a Preliminary Jurisdictional Determination (JD) when requested by the applicant. This allows the landowner to move ahead expeditiously to obtain a USACE permit when it is in his or her best interest to do so. When a Preliminary JD is used, all waters and wetlands that would be affected in any way by the permitted activity on the site are treated as if they are jurisdictional Waters of the United States. An applicant can request a formal JD if it becomes necessary at a later time. Because isolated wetlands are not federally jurisdictional, they cannot be verified using a Preliminary-JD and must go through the formal JD process described in the following paragraph.

When necessary, potential Waters of the United States, including wetlands, can be identified and delineated in accordance with the June 5, 2007 Regulatory Guidance Letter No. 07-01 issued by the USACE following the U.S. Supreme Court Decision *Rapanos vs. United States*. This letter was issued by the agency in order to provide a consistent national approach for making, documenting, and approving jurisdictional determinations (JDs) and making that information available to the public. The USACE has the authority to permit work and the placement of fill in: navigable Waters of the United States under Sections 9 and 10 of the Rivers and Harbors Act (RHA) of 1899; all those waters that are subject to the ebb and flow of the tide and/or are, presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce; and federally jurisdictional waters under Section 404 of the Clean Water Act (CWA). Under the June 5, 2007 Regulatory Guidance Letter, the CWA jurisdiction covers: traditional navigable waters; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent (tributaries that flow year round or have continuous flow at least seasonally [3 months]); and wetlands that directly abut such relatively permanent waters. The CWA jurisdiction also covers non-relatively



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permanent waters (non-navigable tributaries that do not typically flow year round or have continuous flow at least seasonally [3 months]), wetlands adjacent to non-relatively permanent waters and wetlands adjacent to but not directly abutting relatively permanent waters when a fact-specific analysis determines these waters have a significant nexus with a traditional navigable water. A significant nexus determination must be done in order to prove a non-relatively permanent water has more than an insubstantial or speculative effect on the chemical, physical and/or biological integrity of a downstream traditionally navigable water (USACE, 2007).

A field investigation was conducted for the property in September and October, 2012. The location and extent of potential jurisdictional waters are summarized in the following sections. The boundaries identified by EMH&T are potential, as only the USACE has the final authority to determine whether a wetland or water is jurisdictional.



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## 2.0 LITERATURE REVIEW

A review was made of available topographic maps, soils maps, and wetland inventory maps. This information was used to determine site topography and soil types present. It was also used to determine if wetlands had previously been mapped for the site and whether any portions of the site were located within mapped floodways of drainage features.

### 2.1 Site Description

As shown on Exhibit 1, the subject property is located approximately 1 mile west of the Town of Scio in North Township, Harrison County, Ohio. The site is south of Conotton Creek Trail and west of Crimm Road.

### 2.2 Topographic Features

As shown on Exhibit 2, the subject property is between the elevation of 970 and 1080 feet (National Geodetic Vertical Datum) according to the USGS 7.5' Series Scio and Bowerston, Ohio quadrangle (USGS, 1994). Two structures are shown on the topographic map as being located on the subject property. Three streams were mapped on the site. A pond is mapped in the north-central portion of the site.

### 2.3 Mapped Soils

According to the *Web Soil Survey* for Harrison County, Ohio (USDA-NRCS, 2009) as shown on Exhibit 3, the subject property contains twelve soil types. These soils are listed below in Table 1 along with their hydric status. A perennial water symbol is positioned within the north-central portion of the site.

**TABLE 1**  
**Mapped On-site Soils**

<b>Mapped Soil Unit</b>	<b>Inclusions</b>	<b>Hydric Inclusions(Y/N)</b>	<b>Location of Hydric Inclusions</b>
Glenford silt loam, 2 to 6 percent slopes (GsB)	Poorly drained soils	Y (5%)	Depressions
Melvin silt loam, ponded (Me)	Melvin	Y (85%)	Flood Plains
Fitchville silt loam, 0 to 2 percent slopes (FcA)	Poorly drained soils	Y (10%)	Depressions
Fitchville silt loam, 2 to 6 percent slopes (FcB)	Poorly drained soils	Y (10%)	Drainage ways
Tioga silt loam, occasionally flooded (Tg)	Melvin	Y (5%)	Abandoned channels, Oxbows
Hazleton channery sandy loam, 40 to 70 percent slopes (HeF)		N	-



Table 1 - Continued

Coshocton silt loam, 6 to 15 percent slopes (CnC)		N	-
Coshocton silt loam, 15 to 25 percent slopes (CnD)		N	-
Gilpin silt loam, 2 to 6 percent slopes (GnB)		N	-
Gilpin silt loam, 6 to 15 percent slopes (GnC)		N	-
Westmoreland-Dekalb complex, 25 to 40 percent slopes (WnE)		N	-
Oshtemo loam, 2 to 6 percent slopes (OsB)		N	-

## 2.4 Hydrologic Conditions

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USDA-SCS, 1985). According to the USDA, Hazleton channery sandy loam, 40 to 70 percent slopes (HeF), Coshocton silt loam, 6 to 15 percent slopes (CnC), Coshocton silt loam, 15 to 25 percent slopes (CnD), Gilpin silt loam, 2 to 6 percent slopes (GnB), Gilpin silt loam, 6 to 15 percent slopes (GnC), Westmoreland-Dekalb complex, 25 to 40 percent slopes (WnE), and Oshtemo loam, 2 to 6 percent slopes (OsB) are non-hydric soils. Glenford silt loam, 2 to 6 percent slopes (GsB), Melvin silt loam, ponded (Me), Fitchville silt loam, 0 to 2 percent slopes (FcA), Fitchville silt loam, 2 to 6 percent slopes (FcB), and Tioga silt loam, occasionally flooded (Tg) are hydric soils (USDA-NRCS, 2012). Hydric inclusions within this soil unit may be found in depressions, flood plains, drainage ways, abandoned channels, and oxbows.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the site (FEMA, 2009). A majority of the site lies within Zone X (unshaded), which represents an area located outside of the 500-year floodplain. A small portion of the site located near the northwest corner lies within Zone A (blue shaded), which represents an area within the 100-year floodplain. A copy of the FEMA Flood Insurance Rate Map has been attached to this report (Exhibit 4).

The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) *Scio, Ohio* (USFWS, 1976) and *Bowerston, Ohio* (USFWS, 1976) quadrangles were reviewed for the site. As shown in Exhibit 5, one emergent, persistent, seasonally flooded (PEM1C) feature was mapped for the site. Additionally, a portion of a palustrine scrub-shrub, broad-leaved deciduous/palustrine emergent, persistent, temporary flooded (PSS1/EM1A) feature was also mapped within the site boundary.



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### 3.0 INVESTIGATIVE METHODOLOGY

According to the Federal Register (1980; 1982), wetlands are defined as *Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.* Under normal site conditions, all three indicators of jurisdictional wetlands including the presence of hydrophytic macrophytes, hydric soils and certain hydrologic indicators must be identified to meet the criteria for a jurisdictional wetland (Environmental Laboratory, 1987).

EMH&T conducted field investigations of the property in September and October, 2012 to determine the location, extent, and quality of potential Waters of the United States, including wetlands and streams. Areas identified as potential Waters of the United States and areas that exhibited all three indicators of potential jurisdictional wetlands were noted. Identification of potential jurisdictional wetlands required characterization of plant community types, identification of hydric soils, and hydrologic indicators for each community type.

For all potential wetland areas, dominant species in the tree, sapling, shrub, woody vine and herb layers were determined, in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0* (USACE, 2012). Recorded vegetative data consisted of herbs with the greatest percentage of aerial cover within 5' of the plot center. Within a 30' radius of the plot center, saplings and shrubs with the greatest height, trees with the largest relative basal area and woody vines with the greatest number of stems were recorded. Species within each of these layers were listed on data forms in order of dominance.

Dominance was determined for each stratum individually. Dominant species included those that comprised 50 percent of the total dominance measure for a stratum, plus any additional species comprising 20 percent or more of the total dominance measure of a stratum. Hydrophytic vegetation was determined to be present when more than 50 percent of the dominants in a sample area were listed as facultative (FAC), facultative wetland (FACW) or obligate wetland (OBL) plants according to Reed (1988).

Where possible, soil data were collected by digging a test pit to a maximum depth of 20" to determine the presence of hydric soil. Soil matrix and mottle colors were identified using a Munsell Soil Color Chart (Macbeth, Revised 1994). Evidence of any hydric soil characteristics and evidence of the presence of wetland hydrology were also recorded.

The boundaries of areas in which all three wetland criteria were met were identified and measured in the field. Points at which dominant vegetation species changed from wetland to upland, where soils changed from hydric to non-hydric, or where indicators of wetland hydrology were no longer observed were noted. The characteristics of each community type were recorded on dataforms and sample points were chosen to represent both an identified potential wetland and its surrounding upland community.



#### 4.0 DELINEATION INVESTIGATION RESULTS

The field review of the site identified nine (9) potentially jurisdictional non-isolated wetlands within the study area boundary. One of these wetlands (Wetland 9) was previously delineated by Kleinfelder East, Inc. as part of a separate Waters of the U.S. study. Additionally, one (1) linear wetland ditch was also located on-site. The location and extent of potential wetland areas are shown on Exhibit 6. All potential wetlands delineated in the field were marked with flagging tape and subsequently mapped using either traditional land survey techniques or a Trimble® GeoXH Global Positioning System (GPS) unit. The dominant vegetation within the wetland areas along with the hydric soil and wetland hydrologic indicators found within the potential wetland areas are described within the data forms completed during the field investigation. These data forms are located in Appendix A.

Seven (7) potentially jurisdictional headwater habitat streams were observed on the site. The centerline of each stream feature was field marked with flagging tape and mapped using either traditional land survey techniques or a Trimble® GeoXH Global Positioning System (GPS) unit. The locations of the identified streams are depicted on Exhibit 6.

Table 2 shows the extent of the potentially jurisdictional wetlands and streams identified on-site. Table 3 summarizes the classification of each surface water feature. Pictures of the onsite wetlands and streams are included in the Photographs section of this document.

**TABLE 2**  
**Extent of Identified On-site Surface Water Features**

Name	Classification	Length of Potential Jurisdictional Streams (linear feet)	Potential Jurisdictional Stream Area (acres)	Potentially Isolated Wetland (acres)	Potentially Jurisdictional Wetland (acres)
Wetland 1	Herbaceous Wetland	-	-	-	5.91
Wetland 2*	Herbaceous/Scrub-Shrub Wetland	-	-	-	5.21
Wetland 3	Forested/Herbaceous Wetland	-	-	-	0.08
Wetland 4	Forested/Herbaceous Wetland	-	-	-	0.11
Wetland 5	Herbaceous Wetland	-	-	-	0.04
Wetland 6	Herbaceous Wetland	-	-	-	0.08



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Table 2 - Continued

Wetland 7	Herbaceous Wetland	-	-	-	0.06
Wetland 8	Herbaceous Wetland	-	-	-	0.14
Wetland 9#	Forested/ Scrub-Shrub	-	-	-	5.89
Wetland Ditch	Herbaceous Linear Wetland	-	-	-	0.15
Stream 1	Intermittent	725	0.04	-	-
Stream 2	Intermittent	168	0.016	-	-
Stream 3	Intermittent	356	0.013	-	-
Stream 4	Intermittent	1,947	0.07	-	-
Stream 5	Intermittent	96	0.009	-	-
Stream 6	Intermittent	140	0.011	-	-
Stream 7	Perennial	2,232	0.34	-	-
<b>Total</b>		<b>5,664</b>	<b>0.499</b>	<b>0</b>	<b>17.67</b>

\* Only includes the portion of the feature that was located on-site. Feature extends beyond the project site limits.

# Wetland previously delineated by Kleinfelder East, Inc.

**TABLE 3**  
**Jurisdictional Classification of On-site Surface Water Features**

Name	Traditionally Navigable Water (TNW)	Relatively Permanent Water (RPW)	Wetlands abutting a RPW	Wetlands adjacent to a RPW or non-RPW	Non-RPWs	Isolated Wetlands
Wetland 1	-	-	-	X	-	-
Wetland 2*	-	-	X	-	-	-
Wetland 3	-	-	-	X	-	-
Wetland 4	-	-	-	X	-	-
Wetland 5	-	-	-	X	-	-
Wetland 6	-	-	-	X	-	-
Wetland 7	-	-	-	X	-	-
Wetland 8	-	-	-	X	-	-
Wetland 9#	-	-	-	X	-	-
Wetland Ditch	-	-	-	X	-	-
Stream 1	-	-	-	-	X	-
Stream 2	-	-	-	-	X	-
Stream 3	-	-	-	-	X	-
Stream 4	-	-	-	-	X	-
Stream 5	-	-	-	-	X	-
Stream 6	-	-	-	-	X	-
Stream 7	-	X	-	-	-	-

\* This feature extends beyond the project site limits.

# Wetland previously delineated by Kleinfelder East, Inc.



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## 5.0 CONCLUSIONS

A routine delineation of Waters of the United States, including streams and wetlands, has been conducted and a report prepared by EMH&T for the 249.5 acre subject property located approximately 1 mile west of the Town of Scio in North Township, Harrison County, Ohio. This study was performed at the request of and is for the exclusive use of Utica East Ohio Midstream, LLC.

The results of the delineation identified nine (9) potentially jurisdictional non-isolated wetlands, one (1) linear wetland ditch, and seven (7) potentially jurisdictional headwater streams. The identified wetlands comprise 17.67 acres within the site. The potentially jurisdictional streams flow for 5,664 linear feet within the site. The boundaries and jurisdictional status of the wetlands and streams within the project area are potential until verified by the USACE.



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## **APPENDIX A**

USACE Wetland Data Forms

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL1-A  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.407990 Long: -81.119407 Datum: NAD 83  
 Soil Map Unit Name: Tioga silt loam (Tg) (occasionally flooded) NWI classification: DEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		
Point located within wetland at eastern end. Evidence of grazing throughout wetland area.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <ul style="list-style-type: none"> <li><input type="checkbox"/> Surface Water (A1)</li> <li><input type="checkbox"/> High Water Table (A2)</li> <li><input type="checkbox"/> Saturation (A3)</li> <li><input checked="" type="checkbox"/> Water Marks (B1)</li> <li><input type="checkbox"/> Sediment Deposits (B2)</li> <li><input type="checkbox"/> Drift Deposits (B3)</li> <li><input type="checkbox"/> Algal Mat or Crust (B4)</li> <li><input type="checkbox"/> Iron Deposits (B5)</li> <li><input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</li> <li><input type="checkbox"/> Water-Stained Leaves (B9)</li> <li><input type="checkbox"/> Aquatic Fauna (B13)</li> <li><input type="checkbox"/> True Aquatic Plants (B14)</li> <li><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</li> <li><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</li> <li><input checked="" type="checkbox"/> Presence of Reduced Iron (C4)</li> <li><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</li> <li><input type="checkbox"/> Thin Muck Surface (C7)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul>	<b>Secondary Indicators (minimum of two required)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Surface Soil Cracks (B6)</li> <li><input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</li> <li><input checked="" type="checkbox"/> Drainage Patterns (B10)</li> <li><input type="checkbox"/> Moss Trim Lines (B16)</li> <li><input type="checkbox"/> Dry-Season Water Table (C2)</li> <li><input type="checkbox"/> Crayfish Burrows (C8)</li> <li><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</li> <li><input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)</li> <li><input checked="" type="checkbox"/> Geomorphic Position (D2)</li> <li><input type="checkbox"/> Shallow Aquitard (D3)</li> <li><input type="checkbox"/> Microtopographic Relief (D4)</li> <li><input type="checkbox"/> FAC-Neutral Test (D5)</li> </ul>
--	---

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: WL1-A

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	_____	-	-	<b>Number of Dominant Species That Are OBL, FACW, or FAC:</b> <u>4</u> (A)  <b>Total Number of Dominant Species Across All Strata:</b> <u>4</u> (B)  <b>Percent of Dominant Species That Are OBL, FACW, or FAC:</b> <u>100%</u> (A/B)
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>0</u> (A) <u>0</u> (B)  Prevalence Index = B/A = <u>0</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cephalanthus occidentalis</u>	<u>10</u>	YES	OBL	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
<u>10</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Lysimachia nummularia</u>	<u>50</u>	YES	FACW	
2. <u>Schoenoplectus tabernaemontani</u>	<u>30</u>	YES	OBL	
3. <u>Carex spp.</u>	<u>20</u>	YES	FACW	
4. <u>Calla palustris</u>	<u>10</u>	NO	OBL	
5. <u>Eleocharis palustris</u>	<u>5</u>	NO	OBL	
6. <u>Phalaris arundinacea</u>	<u>5</u>	NO	FACW	
7. <u>Polygonum hydropiperoides</u>	<u>5</u>	NO	OBL	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
11. _____	_____	-	-	
<u>125</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.   <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
<u>0</u> = Total Cover				

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



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL1-B

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.407704 Long: -81.120006 Datum: NAD 83

Soil Map Unit Name: Tioga silt loam, occasionally flooded (Tg) NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: Point located within the limits of old Conotton Creek channel scar.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) _____ Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) _____ Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) _____ Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at 10"</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Water in test pit at 10 inches.

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

Sampling Point: WL1-B

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	-	-
2. _____	_____	-	-
3. _____	_____	-	-
4. _____	_____	-	-
5. _____	_____	-	-
6. _____	_____	-	-
7. _____	_____	-	-
8. _____	_____	-	-
	<u>0</u> = Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )			
1. <u>Cephalanthus occidentalis</u>	10	YES	OBL
2. _____	_____	-	-
3. _____	_____	-	-
4. _____	_____	-	-
5. _____	_____	-	-
6. _____	_____	-	-
7. _____	_____	-	-
8. _____	_____	-	-
9. _____	_____	-	-
10. _____	_____	-	-
	<u>10</u> = Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )			
1. <u>Polygonum hydropiperoides</u>	80	YES	OBL
2. <u>Lysimachia nummularia</u>	50	YES	FACW
3. <u>Carex spp.</u>	20	YES	FACW
4. <u>Calla palustris</u>	10	NO	OBL
5. <u>Eleocharis palustris</u>	5	NO	OBL
6. _____	_____	-	-
7. _____	_____	-	-
8. _____	_____	-	-
9. _____	_____	-	-
10. _____	_____	-	-
11. _____	_____	-	-
12. _____	_____	-	-
	<u>165</u> = Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )			
1. _____	_____	-	-
2. _____	_____	-	-
3. _____	_____	-	-
4. _____	_____	-	-
5. _____	_____	-	-
6. _____	_____	-	-
	<u>0</u> = Total Cover		

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)  
 Total Number of Dominant Species Across All Strata: 4 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: WL1-B

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/1	90	7.5 YR 4/6	10			Silty clay	very moist
8-18	GLE Y 2.5/5Gy	100					Silty loam	Saturated

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present?    Yes     No

**Remarks:**

Soil saturated below 8 inches. Water in test pit at 10 inches.



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

Sampling Point: WL1-C

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix nigra</u>	10	YES	OBL
2. _____	-	-	-
3. _____	-	-	-
4. _____	-	-	-
5. _____	-	-	-
6. _____	-	-	-
7. _____	-	-	-
8. _____	-	-	-
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>30ft.</u> )			
1. _____	-	-	-
2. _____	-	-	-
3. _____	-	-	-
4. _____	-	-	-
5. _____	-	-	-
6. _____	-	-	-
7. _____	-	-	-
8. _____	-	-	-
9. _____	-	-	-
10. _____	-	-	-
	0	= Total Cover	
Herb Stratum (Plot size: <u>5 ft.</u> )			
1. <u>Carex spp.</u>	40	YES	FACW
2. <u>Scirpus cyperinus</u>	40	YES	OBL
3. <u>Phalaris arundinacea</u>	30	YES	FACW
4. <u>Polygonum sagittatum</u>	15	NO	OBL
5. <u>Eupatorium perfoliatum</u>	5	NO	FACW
6. _____	-	-	-
7. _____	-	-	-
8. _____	-	-	-
9. _____	-	-	-
10. _____	-	-	-
11. _____	-	-	-
12. _____	-	-	-
	130	= Total Cover	
Woody Vine Stratum (Plot size: <u>30 ft.</u> )			
1. _____	-	-	-
2. _____	-	-	-
3. _____	-	-	-
4. _____	-	-	-
5. _____	-	-	-
6. _____	-	-	-
	0	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

**Hydrophytic Vegetation Present?** Yes  No

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



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL1-UTP  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.407570 Long: -81.119963 Datum: NAD 83  
 Soil Map Unit Name: Fitchville silt loam, 0 to 2 percent slopes (FcA) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		
Sample point located at southern edge of wetland boundary. Area has been open to grazing and has been mowed.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ True Aquatic Plants (B14) ___ High Water Table (A2)      ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)      ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)      ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present?      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
No primary or secondary indicators of hydrology observed.	

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

Sampling Point: WL1-UTP

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	_____	-	-	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
0 = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>135</u> x 4 = <u>540</u> UPL species _____ x 5 = _____ Column Totals: <u>135</u> (A) <u>540</u> (B)  Prevalence Index = B/A = <u>4.0</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )				
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
0 = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )				
1. <u>Festuca spp.</u>	<u>90</u>	<u>YES</u>	<u>FACU</u>	
2. <u>Trifolium pratense</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
3. <u>Trifolium repens</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
4. <u>Taraxacum officinale</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
11. _____	_____	-	-	
12. _____	_____	-	-	
135 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )				
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
0 = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes \_\_\_\_\_ No



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL2  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.407706 Long: -81.129002 Datum: NAD 83  
 Soil Map Unit Name: Melvin silt loam, ponded (Me) NWI classification: PSS1/EMIA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		
Sample point located in the center of the wetland. Wetland area extends beyond study area limits. Area beyond study area is primarily forested and within Conotton Creek flood plain.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Surface Water (A1)</li> <li><input type="checkbox"/> High Water Table (A2)</li> <li><input checked="" type="checkbox"/> Saturation (A3)</li> <li><input type="checkbox"/> Water Marks (B1)</li> <li><input type="checkbox"/> Sediment Deposits (B2)</li> <li><input type="checkbox"/> Drift Deposits (B3)</li> <li><input type="checkbox"/> Algal Mat or Crust (B4)</li> <li><input type="checkbox"/> Iron Deposits (B5)</li> <li><input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</li> <li><input type="checkbox"/> Water-Stained Leaves (B9)</li> <li><input type="checkbox"/> Aquatic Fauna (B13)</li> <li><input type="checkbox"/> True Aquatic Plants (B14)</li> <li><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</li> <li><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</li> <li><input type="checkbox"/> Presence of Reduced Iron (C4)</li> <li><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</li> <li><input type="checkbox"/> Thin Muck Surface (C7)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul>	Secondary Indicators (minimum of two required) <ul style="list-style-type: none"> <li><input type="checkbox"/> Surface Soil Cracks (B6)</li> <li><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</li> <li><input checked="" type="checkbox"/> Drainage Patterns (B10)</li> <li><input type="checkbox"/> Moss Trim Lines (B16)</li> <li><input type="checkbox"/> Dry-Season Water Table (C2)</li> <li><input type="checkbox"/> Crayfish Burrows (C8)</li> <li><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</li> <li><input type="checkbox"/> Stunted or Stressed Plants (D1)</li> <li><input checked="" type="checkbox"/> Geomorphic Position (D2)</li> <li><input type="checkbox"/> Shallow Aquitard (D3)</li> <li><input type="checkbox"/> Microtopographic Relief (D4)</li> <li><input type="checkbox"/> FAC-Neutral Test (D5)</li> </ul>
--	--

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>&lt; 3"</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at 8"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Sample point located within Conotton Creek flood plain. Small depressional areas with standing water are present.

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

Sampling Point: WL2

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )				
1. <u>Alnus glutinosa</u>	2	YES	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
	2	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>30ft.</u> )				
1. <u>Sambucus canadensis</u>	30	YES	FACW	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>0</u> (A) <u>0</u> (B)  Prevalence Index = B/A = <u>0</u>
2. <u>Cephalanthus occidentalis</u>	20	YES	OBL	
3. <u>Viburnum spp.</u>	20	YES	-	
4. <u>Cornus amomum</u>	5	NO	FACW	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
9. _____		-	-	
10. _____		-	-	
	75	= Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )				
1. <u>Leersia oryzoides</u>	50	YES	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex spp.</u>	50	YES	FACW	
3. <u>Polygonum sagittatum</u>	20	YES	OBL	
4. <u>Scirpus cyperinus</u>	15	NO	OBL	
5. <u>Eupatorium perfoliatum</u>	5	NO	FACW	
6. <u>Eupatorium maculatum</u>	5	NO	OBL	
7. <u>Juncus effusus</u>	2	NO	FACW	
8. _____		-	-	
9. _____		-	-	
10. _____		-	-	
11. _____		-	-	
12. _____		-	-	
	147	= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )				
1. _____		-	-	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
	0	= Total Cover		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL2-UTP  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 40.407174 Long: -81.128890 Datum: NAD 83  
 Soil Map Unit Name: Melvin silt loam, ponded (Me) NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Sample point located at southern boundary of wetland.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ True Aquatic Plants (B14) ___ High Water Table (A2)      ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)      ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)      ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No primary or secondary indicators of wetland hydrology observed.	

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

Sampling Point: WL2-UTP

	Absolute % Cover	Dominant Species?	Indicator Status		
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )					
1. <u>Juglans nigra</u>	60	YES	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u>Prunus serotina</u>	20	YES	FACU		
3. <u>Fraxinus pennsylvanica</u>	5	NO	FACW		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
7. _____	-	-	-		
8. _____	-	-	-		
	85	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>10</u> x 2 = <u>20</u> FAC species _____ x 3 = _____ FACU species <u>120</u> x 4 = <u>480</u> UPL species _____ x 5 = _____ Column Totals: <u>130</u> (A) <u>500</u> (B)  Prevalence Index = B/A = <u>3.8</u>	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>30ft.</u> )					
1. <u>Smilax rotundifolia</u>	30	YES	FACU		
2. _____	-	-	-		
3. _____	-	-	-		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
7. _____	-	-	-		
8. _____	-	-	-		
9. _____	-	-	-		
10. _____	-	-	-		
	30	= Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )					
1. <u>Poa spp.</u>	10	YES	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. <u>Verbesina alternifolia</u>	5	NO	FACW		
3. _____	-	-	-		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
7. _____	-	-	-		
8. _____	-	-	-		
9. _____	-	-	-		
10. _____	-	-	-		
11. _____	-	-	-		
12. _____	-	-	-		
	15	= Total Cover			
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )					
1. _____	-	-	-	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.	
2. _____	-	-	-		
3. _____	-	-	-		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
	0	= Total Cover			
<b>Hydrophytic Vegetation Present?</b> Yes _____      No <input checked="" type="checkbox"/>					

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

Dominant species are upland species. A few FACW species are present.



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL3  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.404959 Long: -81.1266568 Datum: NAD 83  
 Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Sample point located in the center of the wetland.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) _____ Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) _____ Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1-2"</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Saturation at surface.

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

Sampling Point: WL3

	Absolute % Cover	Dominant Species?	Indicator Status		
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )					
1. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. <u>Populus deltoides</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>		
3. <u>Ulmus americana</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
7. _____	-	-	-		
8. _____	-	-	-		
	<u>30</u>	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>0</u> (A) <u>0</u> (B)  Prevalence Index = B/A = <u>0</u>	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>30ft.</u> )					
1. _____	-	-	-		
2. _____	-	-	-		
3. _____	-	-	-		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
7. _____	-	-	-		
8. _____	-	-	-		
9. _____	-	-	-		
10. _____	-	-	-		
	<u>0</u>	= Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )					
1. <u>Pilea pumila</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Carex spp.</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>		
3. <u>Poa spp.</u>	<u>15</u>	<u>YES</u>	-		
4. <u>Polygonum sagittatum</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>		
5. <u>Polygonum virginianum</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>		
6. <u>Onoclea sensibilis</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>		
7. _____	-	-	-		
8. _____	-	-	-		
9. _____	-	-	-		
10. _____	-	-	-		
11. _____	-	-	-		
12. _____	-	-	-		
	<u>140</u>	= Total Cover			
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )					
1. _____	-	-	-	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.	
2. _____	-	-	-		
3. _____	-	-	-		
4. _____	-	-	-		
5. _____	-	-	-		
6. _____	-	-	-		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present?      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: (Include photo numbers here or on a separate sheet.)					

**SOIL**

Sampling Point: WL3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10 YR 3/1	60	10 YR 4/6	40	C	M	Silty loam	with fine sand component
5-18	5 YR 4/1	100					sandy silt	with minor clay component

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

Soil saturated at the surface. Soil mapped as Coshocton silt loam, 15 to 25 percent slopes.

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL3-UTP  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.4050035 Long: -81.126574 Datum: NAD 83  
 Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Sample point located along eastern boundary of wetland.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ True Aquatic Plants (B14) ___ High Water Table (A2)                    ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)                            ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                           ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                   ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                        ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                    ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 No wetland hydrology indicators observed.

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

Sampling Point: WL3-UTP

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )				
1. <u>Acer rubrum</u>	50	YES	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Fraxinus pennsylvanica</u>	5	NO	FACW	
3. _____	-	-	-	
4. _____	-	-	-	
5. _____	-	-	-	
6. _____	-	-	-	
7. _____	-	-	-	
8. _____	-	-	-	
	<b>55</b>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>30ft.</u> )				
1. <u>Rosa multiflora</u>	25	YES	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>70</u> x 3 = <u>210</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species _____ x 5 = _____ Column Totals: <u>125</u> (A) <u>420</u> (B)  Prevalence Index = B/A = <u>3.36</u>
2. <u>Acer rubrum</u>	20	YES	FACU	
3. _____	-	-	-	
4. _____	-	-	-	
5. _____	-	-	-	
6. _____	-	-	-	
7. _____	-	-	-	
8. _____	-	-	-	
9. _____	-	-	-	
10. _____	-	-	-	
	<b>45</b>	= Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )				
1. <u>Festuca spp.</u>	25	YES	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____	-	-	-	
3. _____	-	-	-	
4. _____	-	-	-	
5. _____	-	-	-	
6. _____	-	-	-	
7. _____	-	-	-	
8. _____	-	-	-	
9. _____	-	-	-	
10. _____	-	-	-	
11. _____	-	-	-	
12. _____	-	-	-	
	<b>25</b>	= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )				
1. _____	-	-	-	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. _____	-	-	-	
3. _____	-	-	-	
4. _____	-	-	-	
5. _____	-	-	-	
6. _____	-	-	-	
	<b>0</b>	= Total Cover		
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>				

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



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/25/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL4

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.403313 Long: -81.122474 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Point located in the center of the wetland. Wetland shows no evidence of past grazing. Substrate recovering.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>1-2 "</u>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>at Surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface saturation observed.

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

Sampling Point: WL4

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Populus deltoides</u>	20	YES	FAC
2.	<u>Fraxinus pennsylvanica</u>	15	NO	FACW
3.	<u>Ulmus americana</u>	10	NO	FACW
4.	_____	-	-	-
5.	_____	-	-	-
6.	_____	-	-	-
7.	_____	-	-	-
8.	_____	-	-	-
		45	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )				
1.	<u>Rosa multiflora</u>	5	YES	FACU
2.	_____	-	-	-
3.	_____	-	-	-
4.	_____	-	-	-
5.	_____	-	-	-
6.	_____	-	-	-
7.	_____	-	-	-
8.	_____	-	-	-
9.	_____	-	-	-
10.	_____	-	-	-
		5	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )				
1.	<u>Pilea pumila</u>	60	YES	FACW
2.	<u>Carex spp.</u>	30	YES	FACW
3.	<u>Poa spp.</u>	10	NO	FAC
4.	<u>Symplocarpus foetidus</u>	10	NO	OBL
5.	<u>Scirpus validus</u>	5	NO	OBL
6.	<u>Eleocharis palustris</u>	5	NO	OBL
7.	<u>Onoclea sensibilis</u>	2	NO	FACW
8.	_____	-	-	-
9.	_____	-	-	-
10.	_____	-	-	-
11.	_____	-	-	-
12.	_____	-	-	-
		122	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )				
1.	_____	-	-	-
2.	_____	-	-	-
3.	_____	-	-	-
4.	_____	-	-	-
5.	_____	-	-	-
6.	_____	-	-	-
		0	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: WL4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10 YR 3/1	100					Silty loam	Moist throughout sample point
5-7	10 YR 3/6	100					Sand	
7-18	2.5Y 2.5/1	80	10YR 3/0	20	C	M	Clayey silt	With sand component

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: N/A  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: **Soils saturated to surface.**

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/25/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL4-UTP

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.403495 Long: -81.122587 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam. 6 to 15 percent slopes (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?    Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present?                    Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present?          Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: <b>Point located at northern most end of wetland.</b>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                    ___ True Aquatic Plants (B14) ___ High Water Table (A2)                ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)                         ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                        ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                 ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present?    Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?        Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?         Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <b>No hydrologic indicators observed.</b>	

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

Sampling Point: WL4-UTP

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Populus deltoides</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>
2.	<u>Juglans nigra</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
3.				
4.				
5.				
6.				
7.				
8.				
		<u>40</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Rosa multiflora</u>	<u>50</u>	<u>YES</u>	<u>FACU</u>
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		<u>50</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Poa spp.</u>	<u>80</u>	<u>YES</u>	<u>FACU</u>
2.	<u>Trifolium repens</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		<u>100</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
		<u>0</u>	= Total Cover	

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>160</u>	x 4 = <u>640</u>
UPL species _____	x 5 = _____
Column Totals: <u>190</u>	(A) <u>730</u> (B)

Prevalence Index = B/A = 3.8

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

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

Dominant species are upland

**SOIL**

Sampling Point: WL4-UTP

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	7.5 YR 2.5/1	100					Silty loam	
8-16	10 YR 4/4						Silty loam	with small sand component

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> (MLRA 147, 148)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> (MLRA 136, 147)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	
<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)	
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: <u>N/A</u> Depth (inches): _____	Hydric Soil Present?    Yes _____    No <input checked="" type="checkbox"/>
--	---

Remarks: Area mapped within Coshocton silt loam, (CnD), 6 to 15 percent slopes which is "unknown hydric" according to USDA-NRCS.

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/25/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL5

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.403659 Long: -81.117324 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?    Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present?                    Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present?            Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: Wetland appears to be an abandoned pond/water source for cattle. Feature is groundwater fed.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                    ___ True Aquatic Plants (B14) ___ High Water Table (A2)                ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3)                            ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                        ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                 ___ Other (Explain in Remarks) ___ Iron Deposits (B5)                        ___ ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
---	--

<b>Field Observations:</b> Surface Water Present?    Yes <input checked="" type="checkbox"/> No _____    Depth (inches): _____ Water Table Present?        Yes _____    No _____    Depth (inches): _____ Saturation Present?         Yes <input checked="" type="checkbox"/> No _____    Depth (inches): <u>at Surface</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: WL5

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____		-	-
2. _____		-	-
3. _____		-	-
4. _____		-	-
5. _____		-	-
6. _____		-	-
7. _____		-	-
8. _____		-	-
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>30ft.</u> )			
1. _____		-	-
2. _____		-	-
3. _____		-	-
4. _____		-	-
5. _____		-	-
6. _____		-	-
7. _____		-	-
8. _____		-	-
9. _____		-	-
10. _____		-	-
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5 ft.</u> )			
1. <u>Carex spp.</u>	<u>70</u>	<u>YES</u>	<u>FACW</u>
2. <u>Lysimachia nummularia</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
3. <u>Leersia oryzoides</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>
4. <u>Scirpus validus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
5. <u>Eupatorium perfoliatum</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
6. <u>Eleocharis palustris</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>
7. _____		-	-
8. _____		-	-
9. _____		-	-
10. _____		-	-
11. _____		-	-
12. _____		-	-
	<u>155</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30 ft.</u> )			
1. _____		-	-
2. _____		-	-
3. _____		-	-
4. _____		-	-
5. _____		-	-
6. _____		-	-
	<u>0</u>	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: WL5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 5/1	100					Silt loam	saturated
6-18	Gley 1 5/10GY	100					Silt loam	with clay component

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: Soil mapped as Coshocton silt loam, 15 to 25 percent slopes. Soil saturated at surface with loamy gleyed matrix.

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/25/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL5-UTP

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.403690 Long: -81.1172017 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample point at northeast limits of Wetland.	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> ___ Surface Water (A1)                      ___ True Aquatic Plants (B14) ___ High Water Table (A2)                   ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)                            ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                          ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                  ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                        ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                   ___ Other (Explain in Remarks) ___ Iron Deposits (B5)                         ___ ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<p><u>Secondary Indicators (minimum of two required)</u></p> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<p><b>Field Observations:</b></p> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No hydrology indicators observed.	

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

Sampling Point: WL5-UTP

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	-	-
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
		<u>0</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )				
1.	_____	_____	-	-
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
9.	_____	_____	-	-
10.	_____	_____	-	-
		<u>0</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )				
1.	<u>Trifolium repens</u>	<u>60</u>	<u>YES</u>	<u>FACU</u>
2.	<u>Festuca spp.</u>	<u>60</u>	<u>YES</u>	<u>FACU</u>
3.	<u>Asteraceae artemisiifolia</u>	<u>15</u>	<u>NO</u>	<u>FACU</u>
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
9.	_____	_____	-	-
10.	_____	_____	-	-
11.	_____	_____	-	-
12.	_____	_____	-	-
		<u>135</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )				
1.	_____	_____	-	-
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
		<u>0</u>	= Total Cover	

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)  
 Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species 135 x 4 = 540  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: 135 (A) 540 (B)  
 Prevalence Index = B/A = 4.0

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ✓

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

**SOIL**

Sampling Point: WL5-UTP

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 4/3	100					Silt loam	Dry

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Rock/gravel  
 Depth (inches): at approx. 8"

Hydric Soil Present? Yes  No

Remarks: **Soil mapped Coshocton silt loam, 15 to 25 percent slopes. No hydric soil indicators observed.**

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL6

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.404130 Long: -81.117706 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes (CnD) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:  
Sample point located in center of wetland. Wetland shows evidence of past grazing.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	_____ Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Surface Water (A1)	_____ Sparsely Vegetated Concave Surface (B8)
_____ High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	_____ Moss Trim Lines (B16)
_____ Water Marks (B1)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Algal Mat or Crust (B4)	_____ Stunted or Stressed Plants (D1)
_____ Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Shallow Aquitard (D3)
_____ Water-Stained Leaves (B9)	_____ Microtopographic Relief (D4)
_____ Aquatic Fauna (B13)	_____ FAC-Neutral Test (D5)
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots (C3)	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soils (C6)	
_____ Thin Muck Surface (C7)	
_____ Other (Explain in Remarks)	

<b>Field Observations:</b>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at Surface</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Saturation at surface.

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

Sampling Point: WL6

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	-	-
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
		<u>0</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Rosa multiflora</u>	<u>5</u>	<u>YES</u>	<u>FACU</u>
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
9.	_____	_____	-	-
10.	_____	_____	-	-
		<u>5</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Carex spp.</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>
2.	<u>Pilea pumila</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>
3.	<u>Calla palustris</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>
4.	<u>Poa spp.</u>	<u>10</u>	<u>NO</u>	<u>-</u>
5.	<u>Polygonum virginianum</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>
6.	<u>Juncus effusus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
7.	<u>Polygonum sagittatum</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>
8.	<u>Eleocharis palustris</u>	<u>2</u>	<u>NO</u>	<u>OBL</u>
9.	_____	_____	-	-
10.	_____	_____	-	-
11.	_____	_____	-	-
12.	_____	_____	-	-
		<u>137</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	-	-
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
		<u>0</u>	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

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**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0

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**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

---

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

---

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: WL6

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 3/2	90	10 YR 4/4	10	D	M	Silty loam	moist
6-18	5 YR 4/1	100					Clayey silt	with very small sand component

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

Soil mapped as Coshocton silt loam, 15 to 25 percent slopes. Soils saturated as surface.

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL6-UTP

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.404130 Long: -81.117706 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?    Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present?                    Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present?          Yes _____ No <input checked="" type="checkbox"/>	<table style="width:100%; border: none;"> <tr> <td style="border: none;"><b>Is the Sampled Area within a Wetland?</b></td> <td style="border: none; text-align: right;">Yes _____ No <input checked="" type="checkbox"/></td> </tr> </table>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____ No <input checked="" type="checkbox"/>
<b>Is the Sampled Area within a Wetland?</b>	Yes _____ No <input checked="" type="checkbox"/>		
Remarks: Sample point located at the western boundary of wetland.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                    ___ True Aquatic Plants (B14) ___ High Water Table (A2)                ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)                         ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                        ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                 ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present?    Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?        Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?         Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 No hydric soil indicators observed.

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

Sampling Point: WL6-UTP

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Acer rubrum</u>	20	YES	FAC
2.	<u>Quercus alba</u>	10	NO	FACU
3.	<u>Fraxinus pennsylvanica</u>	5	NO	FACW
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
		35	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Rosa multiflora</u>	10	YES	FACU
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
9.	_____	_____	-	-
10.	_____	_____	-	-
		10	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Festuca spp.</u>	25	YES	FACU
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
7.	_____	_____	-	-
8.	_____	_____	-	-
9.	_____	_____	-	-
10.	_____	_____	-	-
11.	_____	_____	-	-
12.	_____	_____	-	-
		25	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	-	-
2.	_____	_____	-	-
3.	_____	_____	-	-
4.	_____	_____	-	-
5.	_____	_____	-	-
6.	_____	_____	-	-
		0	= Total Cover	

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species _____	x 5 = _____
Column Totals: <u>70</u> (A)	<u>250</u> (B)

Prevalence Index = B/A = 3.5

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

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



## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL7

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.404312 Long: -81.117425 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Sample point located in center of wetland. Wetland shows evidence of past grazing.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) _____ Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) _____ Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) _____ Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) _____ <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) _____ <input type="checkbox"/> Water-Stained Leaves (B9) _____ <input type="checkbox"/> Aquatic Fauna (B13) _____	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>&lt; 2"</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

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

Sampling Point: WL7

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
		<u>0</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )				
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
9.			-	-
10.			-	-
		<u>0</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )				
1.	Carex spp.	60	YES	FACW
2.	Polygonum hydropiperoides	40	YES	OBL
3.	Pilea pumila	20	YES	FACW
4.	Polygonum virginianum	10	NO	FAC
5.	Polygonum sagittatum	10	NO	OBL
6.	Juncus effusus	10	NO	FACW
7.	Eupatorium perfoliatum	5	NO	FACW
8.	Phalaris arundinacea	5	NO	FACW
9.			-	-
10.			-	-
11.			-	-
12.			-	-
		<u>160</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )				
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
		<u>0</u>	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is  $\leq 3.0^1$
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: WL7

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/2	100					Silt loam	Saturated
8-18	Gley1 3/10Y	100					Silt loam	Minor clay component

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

Soil saturated at surface. Soil mapped Coshocton silt loam, 15 to 25 percent slopes.

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL7-UTP

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.404251 Long: -81.117348 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample point located at NE boundary of wetland. Area was previously grazed.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ True Aquatic Plants (B14) ___ High Water Table (A2)                    ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)                            ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                          ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                   ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                        ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                    ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No hydrologic indicators observed.	

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

Sampling Point: WL7-UTP

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )																				
1. <u>Acer rubrum</u>	50	YES	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. <u>Liriodendron tulipifera</u>	10	NO	FACU																	
3. _____	-	-	-																	
4. _____	-	-	-																	
5. _____	-	-	-																	
6. _____	-	-	-																	
7. _____	-	-	-																	
8. _____	-	-	-																	
_____	60	= Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>30ft.</u> )																				
1. _____	-	-	-	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>350</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.5</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species _____	x 5 = _____	Column Totals: <u>100</u>	(A) <u>350</u> (B)	Prevalence Index = B/A = <u>3.5</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>50</u>	x 4 = <u>200</u>																			
UPL species _____	x 5 = _____																			
Column Totals: <u>100</u>	(A) <u>350</u> (B)																			
Prevalence Index = B/A = <u>3.5</u>																				
2. _____	-	-	-																	
3. _____	-	-	-																	
4. _____	-	-	-																	
5. _____	-	-	-																	
6. _____	-	-	-																	
7. _____	-	-	-																	
8. _____	-	-	-																	
9. _____	-	-	-																	
10. _____	-	-	-																	
_____	0	= Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )																				
1. <u>Festuca spp.</u>	30	YES	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u>Trifolium repens</u>	10	NO	FACU																	
3. _____	-	-	-																	
4. _____	-	-	-																	
5. _____	-	-	-																	
6. _____	-	-	-																	
7. _____	-	-	-																	
8. _____	-	-	-																	
9. _____	-	-	-																	
10. _____	-	-	-																	
11. _____	-	-	-																	
12. _____	-	-	-																	
_____	40	= Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )																				
1. _____	-	-	-	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.																
2. _____	-	-	-																	
3. _____	-	-	-																	
4. _____	-	-	-																	
5. _____	-	-	-																	
6. _____	-	-	-																	
_____	0	= Total Cover																		
<table style="width:100%; border:none;"> <tr> <td style="width:60%;"><b>Hydrophytic Vegetation Present?</b></td> <td style="width:20%;">Yes _____</td> <td style="width:20%;">No <input checked="" type="checkbox"/></td> </tr> </table>					<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <input checked="" type="checkbox"/>													
<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <input checked="" type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.)     																				

**SOIL**

Sampling Point: WL7-UTP

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 4/4	100					Silty loam clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Roots/Hardpan  
 Depth (inches): Approx. 8"

Hydric Soil Present? Yes  No

Remarks: Soils mapped Coshocton silt loam, 15 to 25 percent slopes. No hydric soil indicators observed.

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL8

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.407947 Long: -81.116377 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: Point located near center of wetland.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2)                      ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3)                                ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)                            ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)                   ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)                         ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)                     ___ Other (Explain in Remarks) ___ Iron Deposits (B5)                            ___ ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at 4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at Surface</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Wetland receives water from spring.

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

Sampling Point: WL8

Tree Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
		<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>30ft.</u> )				
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
9.			-	-
10.			-	-
		<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5 ft.</u> )				
1.	Juncus effusus	25	YES	FACW
2.	Sagittaria latifolia	20	YES	OBL
3.	Typha latifolia	15	NO	OBL
4.	Festuca spp.	10	NO	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
9.			-	-
10.			-	-
11.			-	-
12.			-	-
		<u>70</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30 ft.</u> )				
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
		<u>0</u>	= Total Cover	

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

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

Wetland appears to be regularly mowed.



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL8-UTP  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.407947 Long: -81.116377 Datum: NAD 83  
 Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ True Aquatic Plants (B14) ___ High Water Table (A2)      ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)      ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)      ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <b>No primary or secondary hydrology indicators observed.</b>	

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

Sampling Point: WL8-UTP

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
0 = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>15</u> x 2 = <u>30</u> FAC species _____ x 3 = _____ FACU species <u>85</u> x 4 = <u>340</u> UPL species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>370</u> (B)  Prevalence Index = B/A = <u>3.4</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>30ft.</u> )				
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
0 = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Festuca spp.</u>	60	YES	FACU	
2. <u>Poa pratensis</u>	25	YES	FACU	
3. <u>Juncus effusus</u>	15	NO	FACW	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
11. _____	_____	-	-	
12. _____	_____	-	-	
100 = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
0 = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Point located in mowed and maintained yard.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>

**SOIL**

Sampling Point: WL8-UTP

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
2-19	10 YR 4/2	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present?    Yes \_\_\_\_\_    No

Remarks: **No hydric soil indicators observed.**

Project/Site: <u>Harrison Facility</u>	City/County: <u>Harrison Co.</u>	Date: <u>1/27/2012</u>
Applicant/Owner: <u>Utica East Ohio Midstream, LLC</u>	State: <u>OH</u>	Sampling Point: <u>Wetland 16</u>
Investigator(s): <u>N. Troyan, S. Kuhn, K. Wolff</u>	Section, Township, Range: _____	
Landform (hillslope, terrace, etc.): <u>Forest Bottom</u>	Local relief (concave, convex, none): <u>Concave</u>	Slope(%): <u>2-5%</u>
Subregion(LRR or MLRA): _____	Lat: <u>40°24'26.802"N</u>	Long: <u>81°6'49.209"W</u>
Soil Map Unit Name: _____	Datum: _____	
Soil NWI classification: <u>PFO</u>		
Are climatic/hydrologic conditions on the site typical for this time of year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if no, explain in Remarks)		
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

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

Remarks:

Spring fed basin, adjacent to railroad grade.  
Forested. Open water and PFO. Some parts are PEM or PSS  
(See attached 2nd datasheet.)

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

OR Secondary Indicators (minimum of two required)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14)<br><input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)<br><input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)<br><input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4)<br><input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)<br><input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7)<br><input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks)<br><input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7)<br><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks)<br><input checked="" type="checkbox"/> Water-Stained Leaves (B9)<br><input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Surface Soil Cracks (B6)<br><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)<br><input type="checkbox"/> Drainage Patterns (B10)<br><input checked="" type="checkbox"/> Moss Trim Lines (B16)<br><input type="checkbox"/> Dry-Season Water Table (C2)<br><input type="checkbox"/> Crayfish Burrows (C8)<br><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)<br><input type="checkbox"/> Stunted or Stressed Plants (D1)<br><input type="checkbox"/> Geomorphic Position (D2)<br><input type="checkbox"/> Shallow Aquitard (D3)<br><input type="checkbox"/> Microtopographic Relief (D4)<br><input type="checkbox"/> FAC-Neutral Test (D5) |
|--|--|

**Field Observations:**

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches): <u>12-24"</u>
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches): <u>6"</u>
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches): <u>3"</u>

(includes capillary fringe)

Wetland Hydrology Present?  Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: Wetland 16

Tree Stratum (Plot size: _____)			Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That are OBL, FACW, or FAC: <u>100</u> (A/B)
1	<i>Fraxinus pennsylvanica</i>		35	100 Y	FACW	
2						
3						
4						
5						
6						
7						
			35	= Total Cover		
Sapling Stratum (Plot size: _____)						<b>Prevalence Index worksheet:</b> Total % Cover of: <u>        </u> Multiply by: OBL species <u>        </u> x1= <u>        </u> FACW species <u>        </u> x2= <u>        </u> FAC species <u>        </u> x3= <u>        </u> FACU species <u>        </u> x4= <u>        </u> UPL species <u>        </u> x5= <u>        </u> Column Totals <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A= <u>        </u>
1						
2						
3						
4						
5						
6						
7						
				= Total Cover		
Shrub Stratum (Plot size: _____)						<b>Hydrophytic Vegetation Indicators:</b> 1. Rapid Test for Hydrophytic Vegetation X 2. Dominance Test is >50% 3. Prevalence Index is ≤ 3.0 <sup>1</sup> 4. Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	<i>Crataegus spp.</i>		30	86 Y		
2	<i>Cornus sericea</i>		5	14 N	FACW	
3						
4						
5						
6						
7						
			35	= Total Cover		
Herb Stratum (Plot size: _____)						<b>Definitions of Five Vegetation Strata:</b> <b>Tree-</b> Woody plants, excluding woody vines, approx. 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). <b>Sapling-</b> Woody plants, excluding woody vines, approx. 20 ft (6m) or more in height and less than 3in. (7.6 cm) DBH <b>Shrub-</b> Woody plants, excluding woody vines, approx. 3 to 20 ft (1 to 6m) in height. <b>Herb-</b> All herbaceous (non-woody) plants, incl. herbaceous vines, regardless of size, and woody plants, except woody vines, less than approx. 3 ft (1m) in height. <b>Woody Vine-</b> All woody vines, regardless of height.
1	<i>Phalaris arundinacea</i>		20	24 Y	FACW	
2	<i>Carex spp.</i>		15	18 N		
3	<i>Microstegium vimineum</i>		50	59 Y	FAC	
4						
5						
6						
7						
8						
9						
10						
11						
12						
			85	=Total Cover		
Woody Vine Stratum (Plot size: _____)						Hydrophytic Vegetation Present? Yes x No _____
1						
2						
3						
4						
5						
				=Total Cover		

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



Project/Site: <u>Harrison Facility</u>	City/County: <u>Harrison Co.</u>	Date: <u>1/27/2012</u>
Applicant/Owner: <u>Utica East Ohio Midstream, LLC</u>	State: <u>OH</u>	Sampling Point: <u>Wetland 16</u>
Investigator(s): <u>N. Troyan, S. Kuhn, K. Wolff</u>	Section, Township, Range: _____	
Landform (hillslope, terrace, etc.): _____	Local relief (concave, convex, none): <u>Concave</u>	Slope(%): _____
Subregion(LRR or MLRA): _____	Lat: <u>40°24'23.424"N</u>	Long: <u>81°6'42.494"W</u>
Soil Map Unit Name: _____	Datum: _____	
Soil NWI classification: <u>PEM/PSS</u>		
Are climatic/hydrologic conditions on the site typical for <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if no, explain in Remarks)		
this time of year?		
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed?		Are "Normal Circumstances" present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?		(If needed, explain any answers in Remarks.)

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

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

Remarks:

Some parts are forested  
(See attached 2nd datasheet.)

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<p><u>Primary Indicators</u> (minimum of one is required: check all that apply)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<p><u>OR Secondary Indicators</u> (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<p><b>Field Observations:</b></p> <p>Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth (inches): _____</p> <p>Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth (inches): <u>6"</u></p> <p>Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth (inches): <u>3"</u></p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: Wetland 16

	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
<b>Tree Stratum</b> (Plot size: _____ )				Number of Dominant Species
1 <i>Fraxinus pennsylvanica</i>	35	100 Y	FACW	That are OBL, FACW or FAC: <u>3</u> (A)
2 _____	_____	_____	_____	Total Number of Dominant
3 _____	_____	_____	_____	Species Across All Strata: <u>4</u> (B)
4 _____	_____	_____	_____	Percent of Dominant Species
5 _____	_____	_____	_____	That are OBL, FACW, or FAC: <u>75</u> (A/B)
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
35 = Total Cover				
<b>Sapling Stratum</b> (Plot size: _____ )				<b>Prevalence Index worksheet:</b>
1 _____	_____	_____	_____	Total % Cover of: _____ Multiply by:
2 _____	_____	_____	_____	OBL species _____ x1= _____
3 _____	_____	_____	_____	FACW species _____ x2= _____
4 _____	_____	_____	_____	FAC species _____ x3= _____
5 _____	_____	_____	_____	FACU species _____ x4= _____
6 _____	_____	_____	_____	UPL species _____ x5= _____
7 _____	_____	_____	_____	Column Totals _____ (A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A= _____
<b>Shrub Stratum</b> (Plot size: _____ )				<b>Hydrophytic Vegetation Indicators:</b>
1 <i>Rosa multiflora</i>	5	86 Y	FACU	1. Rapid Test for Hydrophytic Vegetation
2 <i>Cornus sericea</i>	30	14 N	FACW	X 2. Dominance Test is >50%
3 _____	_____	_____	_____	3. Prevalence Index is ≤ 3.0 <sup>1</sup>
4 _____	_____	_____	_____	4. Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5 _____	_____	_____	_____	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6 _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7 _____	_____	_____	_____	
35 = Total Cover				
<b>Herb Stratum</b> (Plot size: _____ )				<b>Definitions of Five Vegetation Strata:</b>
1 <i>Phalaris arundinacea</i>	15	17 N	FACW	<b>Tree-</b> Woody plants, excluding woody vines, approx. 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
2 <i>Juncus effusus</i>	20	22 Y	FACW	<b>Sapling-</b> Woody plants, excluding woody vines, approx. 20 ft (6m) or more in height and less than 3in. (7.6 cm) DBH
3 <i>Microstegium vimineum</i>	60	67 Y	FAC	<b>Shrub-</b> Woody plants, excluding woody vines, approx. 3 to 20 ft (1 to 6m) in height.
4 _____	_____	_____	_____	<b>Herb-</b> All herbaceous (non-woody) plants, incl. herbaceous vines, regardless of size, and woody plants, except woody vines, less than approx. 3 ft (1m) in height.
5 _____	_____	_____	_____	<b>Woody Vine-</b> All woody vines, regardless of height.
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
11 _____	_____	_____	_____	
12 _____	_____	_____	_____	
90 = Total Cover				Hydrophytic Vegetation Present? Yes x No _____
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
_____ = Total Cover				

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



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont**

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12

Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL-Ditch

Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_

Subregion (LRR or MLRA): LRR Lat: 40.404900 Long: -81.117556 Datum: NAD 83

Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	_____ <u>Surface Soil Cracks (B6)</u>
<input checked="" type="checkbox"/> <u>Surface Water (A1)</u>	_____ <u>Sparsely Vegetated Concave Surface (B8)</u>
_____ <u>High Water Table (A2)</u>	<input checked="" type="checkbox"/> <u>Drainage Patterns (B10)</u>
<input checked="" type="checkbox"/> <u>Saturation (A3)</u>	_____ <u>Moss Trim Lines (B16)</u>
_____ <u>Water Marks (B1)</u>	_____ <u>Dry-Season Water Table (C2)</u>
_____ <u>Sediment Deposits (B2)</u>	_____ <u>Crayfish Burrows (C8)</u>
_____ <u>Drift Deposits (B3)</u>	_____ <u>Saturation Visible on Aerial Imagery (C9)</u>
_____ <u>Algal Mat or Crust (B4)</u>	_____ <u>Stunted or Stressed Plants (D1)</u>
_____ <u>Iron Deposits (B5)</u>	<input checked="" type="checkbox"/> <u>Geomorphic Position (D2)</u>
_____ <u>Inundation Visible on Aerial Imagery (B7)</u>	_____ <u>Shallow Aquitard (D3)</u>
_____ <u>Water-Stained Leaves (B9)</u>	_____ <u>Microtopographic Relief (D4)</u>
_____ <u>Aquatic Fauna (B13)</u>	_____ <u>FAC-Neutral Test (D5)</u>

<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at 1"</u>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at Surface</u>	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at Surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Linear wetland ditch receiving drainage from wetlands and streams above the feature within the watershed.

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

Sampling Point: WL-Ditch

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
		<u>0</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )				
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
7.			-	-
8.			-	-
9.			-	-
10.			-	-
		<u>0</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )				
1.	<u>Juncus effusus</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>
2.	<u>Leersia oryzoides</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>
3.	<u>Sagittaria latifolia</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>
4.	<u>Festuca spp.</u>	<u>20</u>	<u>NO</u>	<u>FACU</u>
5.	<u>Sparganium americanus</u>	<u>15</u>	<u>NO</u>	<u>OBL</u>
6.			-	-
7.			-	-
8.			-	-
9.			-	-
10.			-	-
11.			-	-
12.			-	-
		<u>100</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )				
1.			-	-
2.			-	-
3.			-	-
4.			-	-
5.			-	-
6.			-	-
		<u>0</u>	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

---

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = 0

---

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

---

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

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

---

**Hydrophytic Vegetation Present?** Yes  No

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

Wetland has evidence of being grazed regularly by cattle. Vegetated throughout feature - no ordinary highwater mark is present. No bed and bank.



## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Utica East Harrison Facility - Phase II City/County: Scio/Harrison Sampling Date: 9/26/12  
 Applicant/Owner: Utica East Ohio Midstream, LLC State: Ohio Sampling Point: WL-Ditch UTP  
 Investigator(s): Milligan/Krokonko, EMH&T Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR Lat: 40.404900 Long: -81.117556 Datum: NAD 83  
 Soil Map Unit Name: Coshocton silt loam, 15 to 25 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

### HYDROLOGY

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p> <input type="checkbox"/> Surface Water (A1)      <input type="checkbox"/> True Aquatic Plants (B14)  <input type="checkbox"/> High Water Table (A2)      <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Saturation (A3)      <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)  <input type="checkbox"/> Water Marks (B1)      <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Sediment Deposits (B2)      <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Drift Deposits (B3)      <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Algal Mat or Crust (B4)      <input type="checkbox"/> Other (Explain in Remarks)  <input type="checkbox"/> Iron Deposits (B5)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)  <input type="checkbox"/> Water-Stained Leaves (B9)  <input type="checkbox"/> Aquatic Fauna (B13)                 </p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p> <input type="checkbox"/> Surface Soil Cracks (B6)  <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)  <input checked="" type="checkbox"/> Drainage Patterns (B10)  <input type="checkbox"/> Moss Trim Lines (B16)  <input type="checkbox"/> Dry-Season Water Table (C2)  <input type="checkbox"/> Crayfish Burrows (C8)  <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1)  <input checked="" type="checkbox"/> Geomorphic Position (D2)  <input type="checkbox"/> Shallow Aquitard (D3)  <input type="checkbox"/> Microtopographic Relief (D4)  <input type="checkbox"/> FAC-Neutral Test (D5)                 </p>
<p><b>Field Observations:</b></p> <p>Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____                  (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/></p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
No primary or secondary hydrology indicators observed.	

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

Sampling Point: WL-Ditch UTP

<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	_____	-	-	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>100</u> x 4 = <u>400</u> UPL species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>400</u> (B)  Prevalence Index = B/A = <u>4.0</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
<u>0</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Festuca spp.</u>	<u>60</u>	<u>YES</u>	<u>FACU</u>	
2. <u>Poa pratensis</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
3. <u>Dactylis glomerata</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
7. _____	_____	-	-	
8. _____	_____	-	-	
9. _____	_____	-	-	
10. _____	_____	-	-	
11. _____	_____	-	-	
12. _____	_____	-	-	
<u>100</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
1. _____	_____	-	-	
2. _____	_____	-	-	
3. _____	_____	-	-	
4. _____	_____	-	-	
5. _____	_____	-	-	
6. _____	_____	-	-	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Typical upland grazed pasture.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>

**SOIL**

Sampling Point: WL-Ditch UTP

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
2-18	10 YR 4/4	100					Silt loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

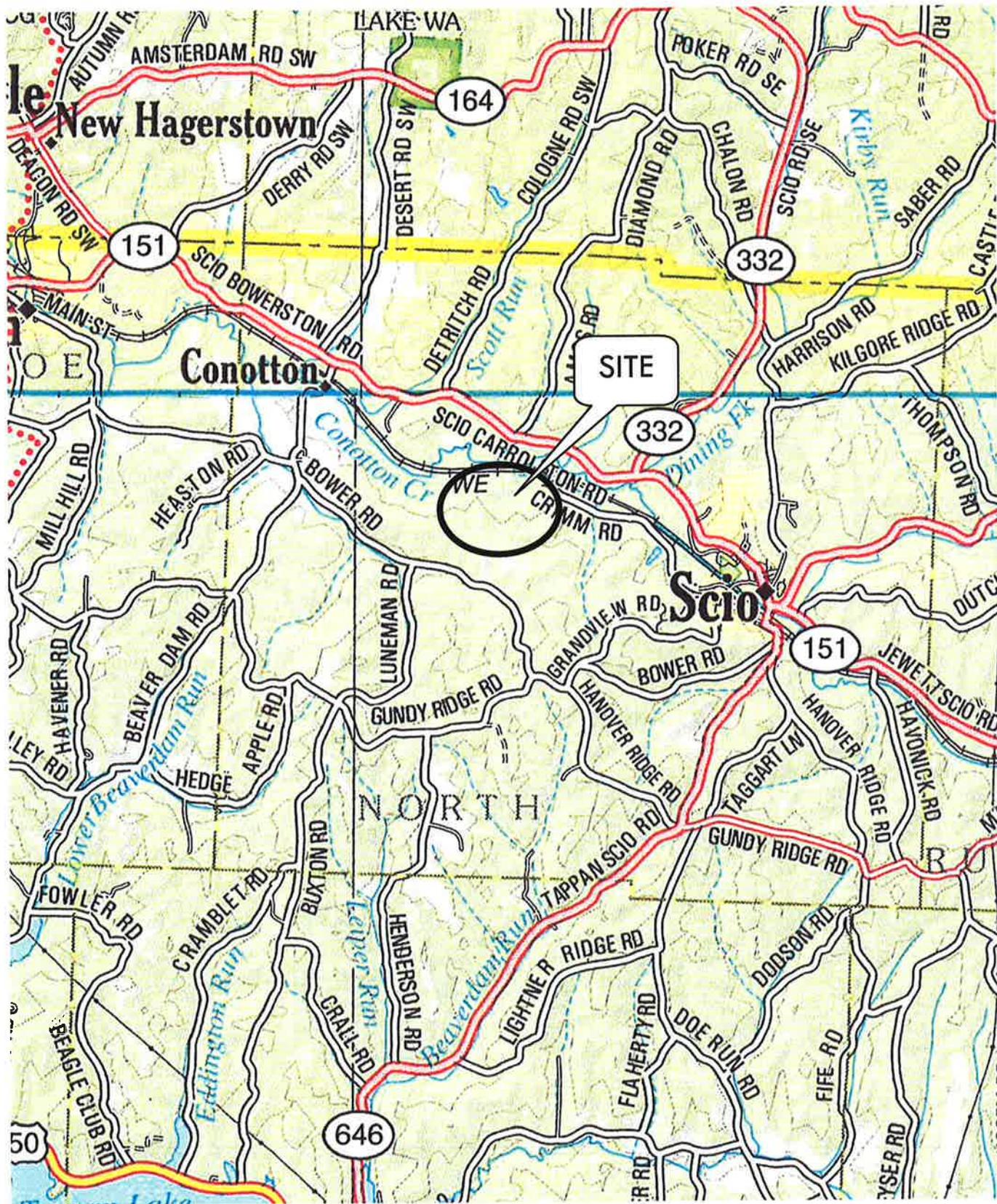
Hydric Soil Present?    Yes \_\_\_\_\_    No

Remarks: **Well drained upland soil.**



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## EXHIBITS



NORTH TOWNSHIP, HARRISON COUNTY, OHIO  
 UTICA EAST – HARRISON HUB FACILITY  
 AREA LOCATION MAP

Exhibit 1



Evans, Mechwart, Hamblton & Tilton, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus, OH 43054  
 Phone: 614.775.4500 Fax: 614.775.4800

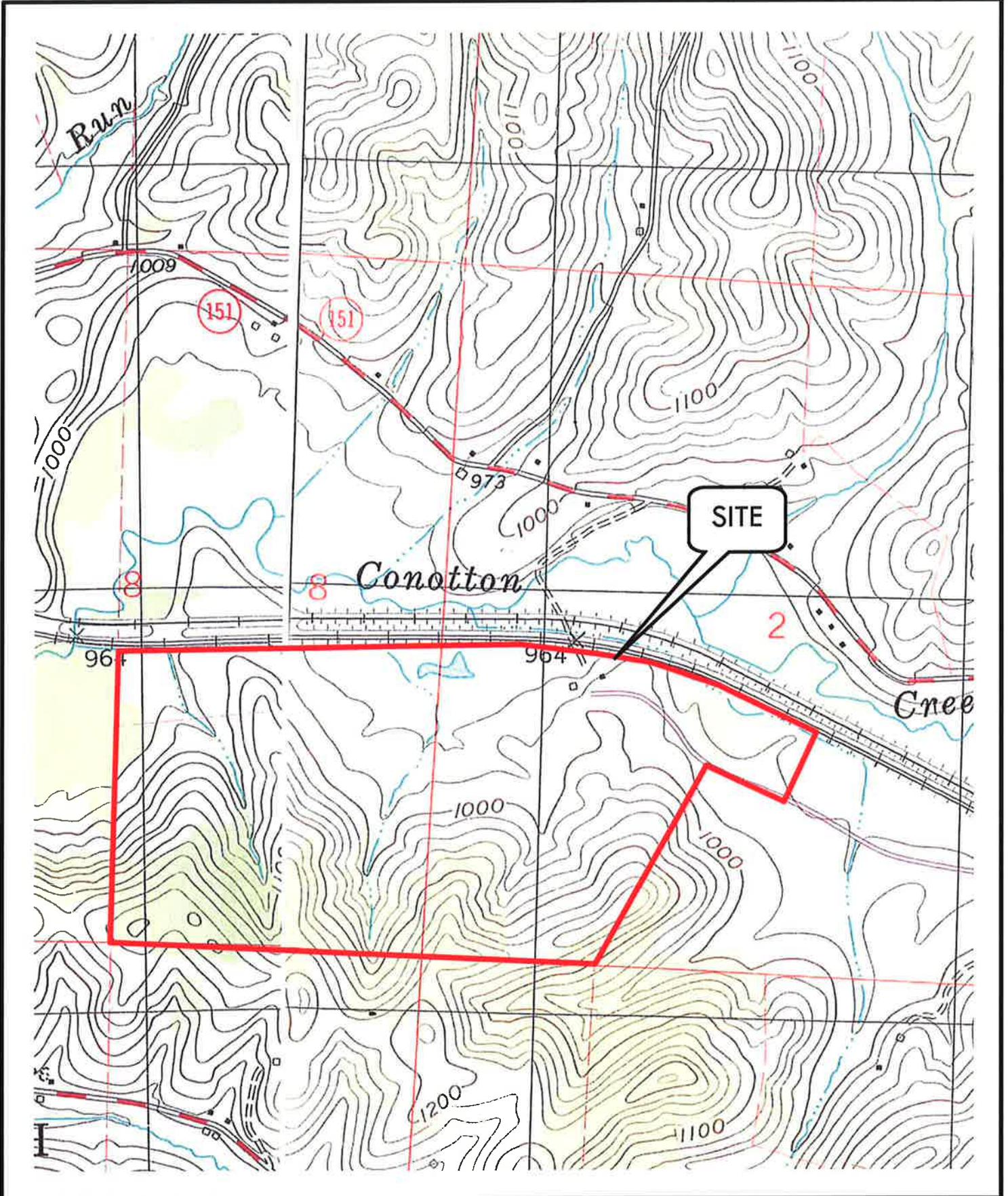
M C M X X V I



SCALE: 1" = 1 MILE



Source: OHIO ATLAS & GAZETTEER (2011)



**SITE**

**NORTH TOWNSHIP, HARRISON COUNTY, OHIO  
 UTICA EAST HARRISON HUB FACILITY  
 USGS TOPOGRAPHIC MAP**

**Exhibit 2**

**EMHT**

Evans, Mechwart, Hambleton & Tillon, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus, OH 43054  
 Phone: 614.775.4500 Fax: 614.775.4800

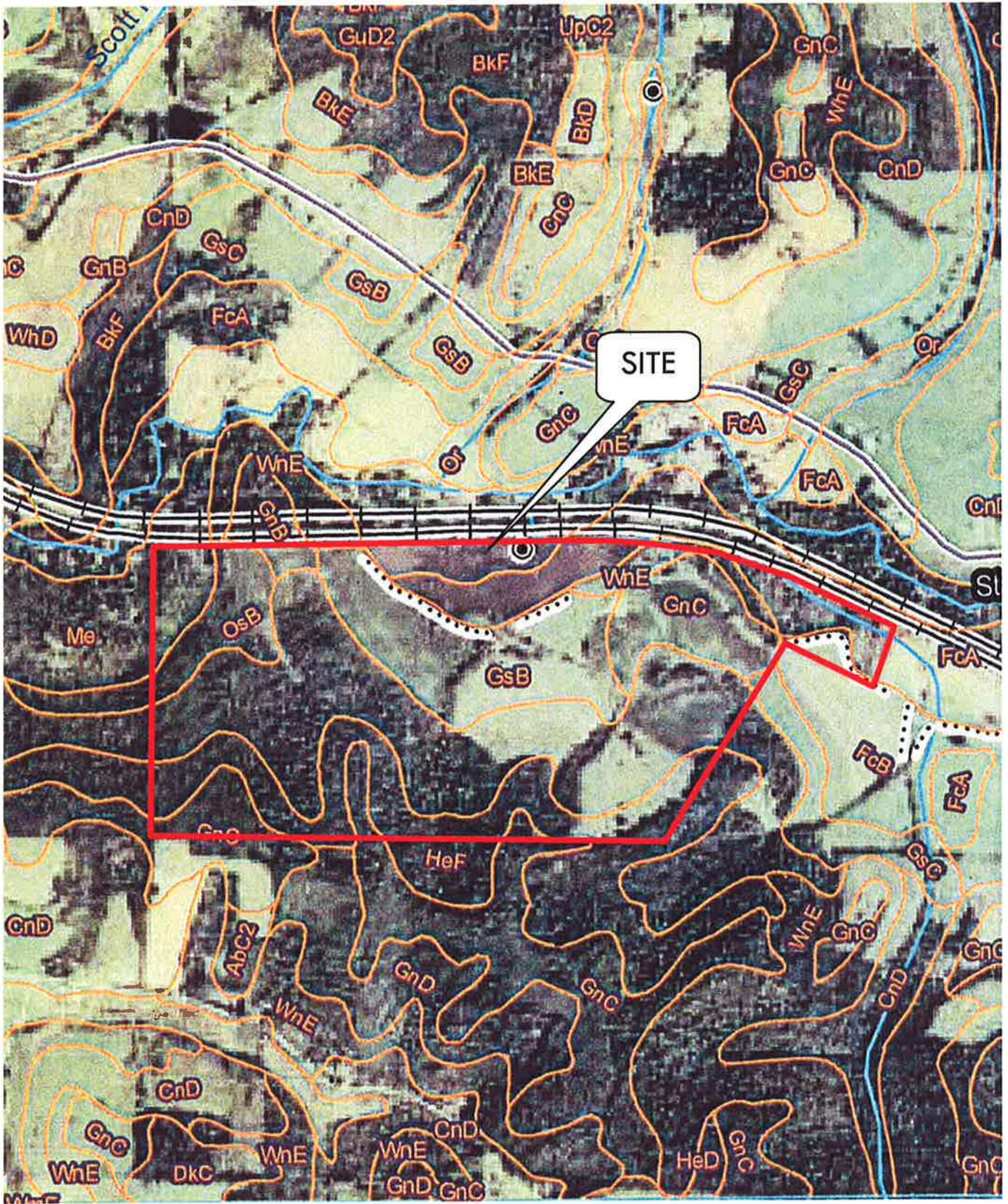
M C M X X V I



SCALE: 1"=1000'



Source:  
 - USGS SCIO, OHIO QUAD (1994)  
 - USGS BOWERSTON, OHIO QUAD (1994)



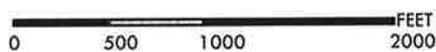
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M C M X X V I



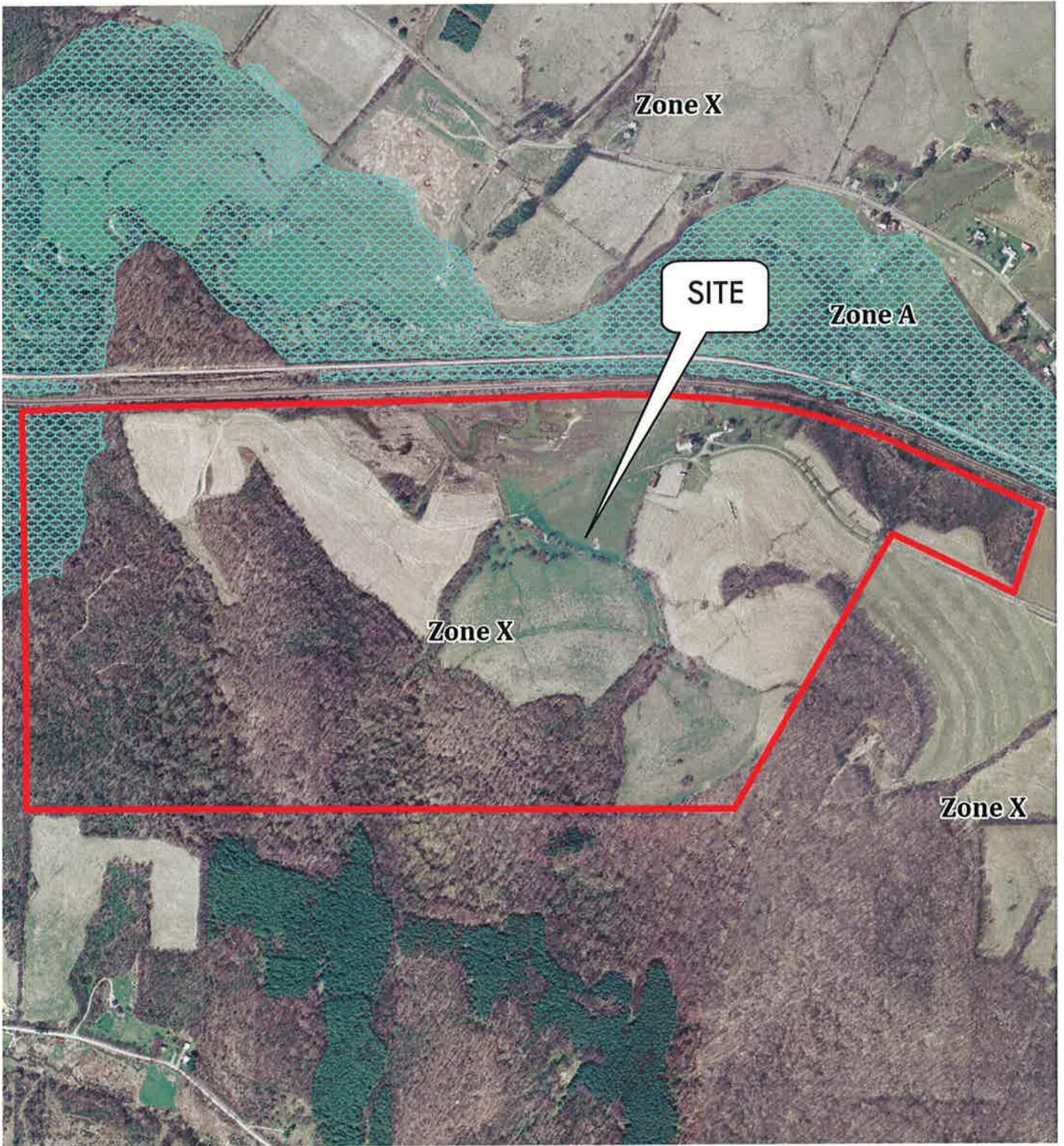
SCALE: 1"=1000'



**NORTH TOWNSHIP, HARRISON COUNTY, OHIO  
 UTICA EAST – HARRISON HUB FACILITY  
 SOIL SURVEY OF HARRISON COUNTY**

**Exhibit 3**

Source:  
 - USDA/NRCS (2009)



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M C A X X V I



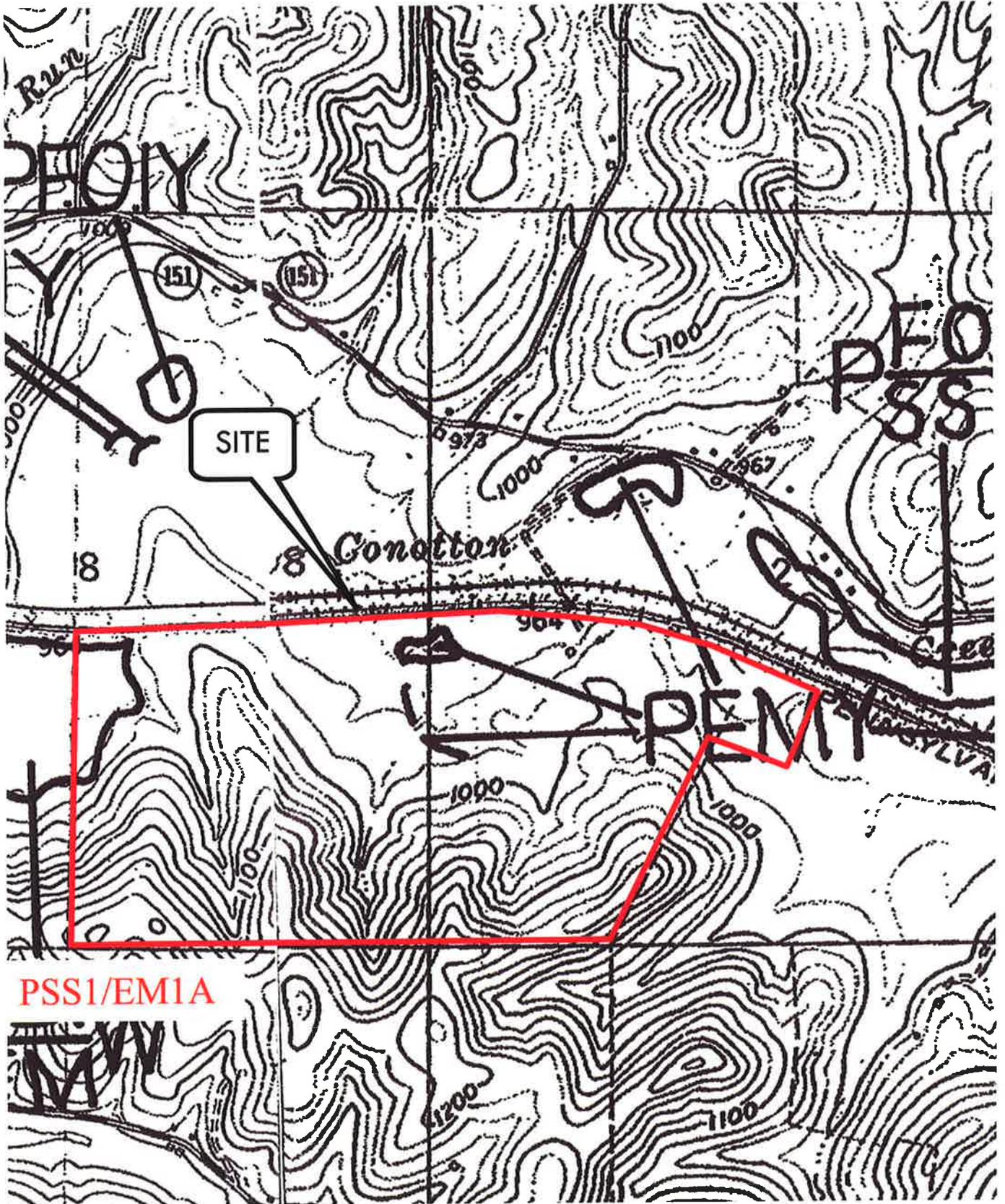
SCALE: 1"=800'



**NORTH TOWNSHIP, HARRISON COUNTY, OHIO  
 UTICA EAST – HARRISON HUB FACILITY  
 FLOOD INSURANCE RATE MAP**

**Exhibit 4**

Source:  
 - FEMA 39067C0045D, 39067C0061D,  
 39067C0045D (2009)



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M C M X X V I

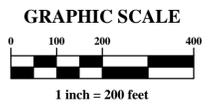
SCALE: 1"=1000'

0 500 1000 2000 FEET

NORTH TOWNSHIP, HARRISON COUNTY, OHIO  
 UTICA EAST HARRISON HUB FACILITY  
 NATIONAL WETLAND INVENTORY MAP

Exhibit 5

Source:  
 - USFWS SCIO, OHIO (1976)  
 - USGS BOWERSTON, OHIO (1976)



**LEGEND**

- EXISTING STREAM
- EXISTING WETLAND

VILLAGE OF SCIO, HARRISON COUNTY, OHIO  
 EXISTING STREAM AND WETLAND DELINEATION EXHIBIT  
 FOR  
**HARRISON HUB FACILITY**  
**UTICA EAST OHIO MIDSTREAM, LLC**  
 EXHIBIT 6

**EMHT**  
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 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus, OH 43054  
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 emht.com

DATE:	November 02, 2012
SCALE:	As Noted
JOB NO.:	2012-1405
SHEET:	1 of 1



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## PHOTOGRAPHS



**Photo 1:** Wetland 1 facing northwest (EMH&T, 09/18/12).



**Photo 2:** Wetland 2 facing northeast towards the northern wetland boundary and Rowe Road. (EMH&T) 09/26/12)



**Photo 3:** Wetland 3 facing south (EMH&T, 09/26/12).



**Photo 4:** Wetland 4 facing north (EMH&T, 09/26/12).



**Photo 5:** Wetland 5 looking northwest (EMH&T, 09/25/12).



**Photo 6:** Wetland 6 looking north (EMH&T, 09/26/12).



**Photo 7:** Wetland 7 looking northwest (EMH&T, 09/25/12).



**Photo 8:** Wetland 8 looking north (EMH&T, 10/17/12).



**Photo 9:** Wetland 9 looking northwest (EMH&T, 09/15/12).



**Photo 10:** Linear Wetland Ditch looking southeast (09/05/12).



**Photo 11:** Stream looking north (EMH&T, 09/04/12).



**Photo 12:** Stream 2 looking southwest (EMH&T, 09/04/12).



**Photo 13:** Stream 3 looking southwest (EMH&T, 09/04/12).



**Photo 14:** Stream 4 looking south (EMH&T, 09/04/12).



**Photo 15:** Stream 5 looking northwest (EMH&T, 09/04/12).



**Photo 16:** Stream 6 looking southeast (EMH&T, 09/04/12).



**Photo 17:** Stream 7 looking north (EMH&T, 09/04/12).