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Phone: (412) 446-1728

PROJECT NO. 102502114

MEMORANDUM

TO:	Equitrans Midstream, LLC
FROM:	Samantha Zelenka
DATE:	September 13, 2019
PROJECT NAME:	EHP418_000 Pipeline
SUBJECT:	Aquatic Resources Investigation

INTRODUCTION

Aquatic resource investigations of the proposed EHP418_000 Pipeline project were conducted on April 2 and July 24, 2019. The proposed project is in Ohio Township, Monroe County, Ohio and appears on the New Martinsville, Ohio United States Geological Survey (USGS) 7.5-minute topographic quadrangle (**Attachment A, Figure 1**). The area of investigation (AOI) included an area of adequate size to encompass the limits of disturbance (LOD) for the proposed project.

METHODS

Wetland investigations were done using the updated methodology outlined in the 1987 *Corps of Engineers Wetland Delineation Manual* and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0.* This approach recognizes the three parameters of hydrology, vegetation, and soils to identify and delineate wetland boundaries. Stream identifications were done in accordance with Section 404 of the Clean Water Act (CWA), which defines the landward limit of jurisdiction as the ordinary high water mark within the limit of non-tidal waters. Prior to the field investigation, published resource information pertaining to the AOI was gathered and reviewed; information sources included soils data, stream data, and wetlands data from various sources. Upland and wetland habitat conditions throughout the AOI were documented at sampling point locations to characterize and describe the varying conditions within the study area. These sampling point data were recorded on USACE Wetland Determination Data Forms. Additional wetland and stream data were recorded on data forms published by the Ohio Environmental Protection Agency (OEPA).

RESULTS

The AOI consists of young deciduous forests and existing utility rights-of-way (ROW). Twelve streams and three wetlands were identified within the AOI. The following descriptions provide summaries of the uplands, wetlands, and streams. Please refer to **Attachment A**, **Figure 2** for an aerial overview of all features referenced in this report.

Uplands

Upland habitat within the AOI consists predominantly of forest, and there are some existing ROW crossings. Dominant conditions in these upland areas of the AOI were characterized by three sample points. These sampling points included documentation of vegetation, soils, and indicators of hydrology. There were no indicators of wetland hydrology, hydrophytic vegetation, or hydric soils observed in the upland communities. Dominant plants in the uplands consisted of common species typical of this region. For a complete list of plants, soils, and other pertinent information of upland site conditions, please refer to the USACE Wetland Determination Data Forms in **Attachment B**. Representative photographs

documenting upland site conditions within the AOI are provided in **Attachment C**. **Table 1** provides a summary of sampling information regarding the uplands.

Table 1. Uplands within the Project AOI.				
Sampling Point	Habitat Type	Sampling Point Coordinates		
SP-190724-0940	Forest	39.70409, -80.85666		
SP-190322-1630	Forest	39.70821, -80.84609		

Wetlands

Three palustrine emergent (PEM) wetlands were identified within the AOI during the site investigation. PEM wetlands are characterized by a dominance of herbaceous vegetation (e.g., marshes). Several indicators of hydrophytic vegetation, hydric soils, and wetland hydrology were recorded at representative sampling points. Dominant plant species in the wetlands consisted of common species typical of this region. For specific information regarding the wetlands, please refer to the USACE Wetland Determination Data Forms and OEPA Ohio Rapid Assessment Method for Wetlands (ORAM) Forms in **Attachment B**. Wetland locations and photographs are in **Attachment A**, Figure 2 and **Attachment C**, respectively. **Table 2** provides a summary of pertinent information regarding the wetlands.

Table 2. Wetlands within the Project AOI.				
Wetland ID	Habitat Type	ORAM v 5.0 ORAM		Coordinates
Wettand ib	Habitat Type	Score	Category	coordinates
W-190402-1540	PEM	4 points	Category 1	39.70811, -80.84880
W-190402-1545	PEM	4 points	Category 1	39.70846, -80.84772
W-190402-1555	PEM	4 points	Category 1	39.70866, -80.84770

Streams

The field investigation identified six ephemeral streams, five intermittent streams, and one perennial stream within the AOI. These streams are Stetson Run and unnamed tributaries (UNT) to the Ohio River within the Central Ohio Tributaries watershed drainage basin. The Ohio Administrative Code (OAC), Rule 3745-1-32, Water Use Designations lists Ohio River as Warm Water Habitat (WWH), Public Water Supply (PWS), Agricultural Water Supply (AWS), Industrial Water Supply (IWS) sources, and bathing waters. Stetson Run and the UNTs to the Ohio River do not have water use designations. The Ohio River is not listed in the OAC Rule 3745-1-05 Antidegradation list as a Superior High Quality Water, nor is it listed as a Scenic River by the National Park Service (U.S. Department of the Interior) or the Ohio Department of Natural Resources (ODNR) (Division of Watercraft). Stetson Run and the UNT streams are in a Possibly Eligible Area for 401 Water Quality Certification. The stream locations and photographs are in **Attachment A, Figure 2** and **Attachment C**, respectively. **Attachment B** contains OEPA Primary Headwater Habitat Evaluation (HHEI) Forms that contain information specific to each stream. **Table 3** provides a summary of pertinent information regarding the streams.

Table 3. Streams within the project AOI.					
Stream ID	Stream Type	Stream Name	HHEI Score	HHEI Class	Coordinates
STR-190724-1000	Ephemeral	UNT to Ohio River	35	Class I	39.70394, -80.85602
STR-190724-1020	Perennial	Stetson Run	81	Class III	39.70437, -80.85540
STR-190724-1100	Ephemeral	UNT to Ohio River	24	Class I	39.70696, -80.85174
STR-190724-1115	Ephemeral	UNT to Ohio River	24	Class I	39.70704, -80.85151

Table 3. Streams within the project AOI.					
Stream ID	Stream Type	Stream Name	HHEI Score	HHEI Class	Coordinates
STR-190402-1440	Intermittent	UNT to Ohio River	51	Class II	39.70832, -80.85017
STR-190402-1500	Intermittent	UNT to Ohio River	41	Class II	39.70794, -80.85073
STR-190402-1510	Ephemeral	UNT to Ohio River	22	Class I	39.70830, -80.84984
STR-190402-1530	Ephemeral	UNT to Ohio River	22	Class I	39.70824, -80.84879
STR-190402-1545	Intermittent	UNT to Ohio River	28	Class II	39.70870, -80.84782
STR-190402-1600	Intermittent	UNT to Ohio River	28	Class II	39.70878, -80.84748
STR-190402-1605	Intermittent	UNT to Ohio River	28	Class II	39.70902, -80.84694
STR-190402-1620	Ephemeral	UNT to Ohio River	22	Class I	39.70881, -80.84667

CONCLUSIONS

A field investigation identified three wetlands and 12 streams within the AOI. Upland areas within the AOI include deciduous forests and existing ROWs.

The USACE is the federal regulatory authority for determination of "Waters of the United States"; the project is located in southeast Ohio, within the jurisdiction of the Pittsburgh District of the U.S. Army Corps of Engineers. The OEPA is the state regulatory authority for streams and wetlands.

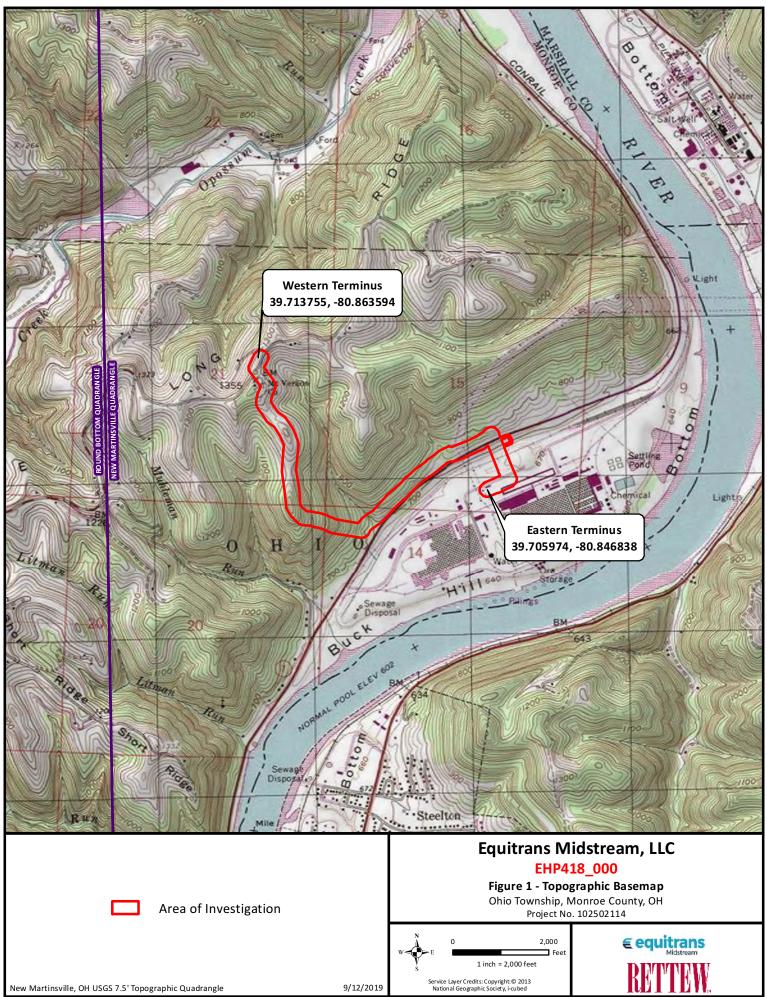
Reviewed by: Martin A. Friday, Senior Biologist

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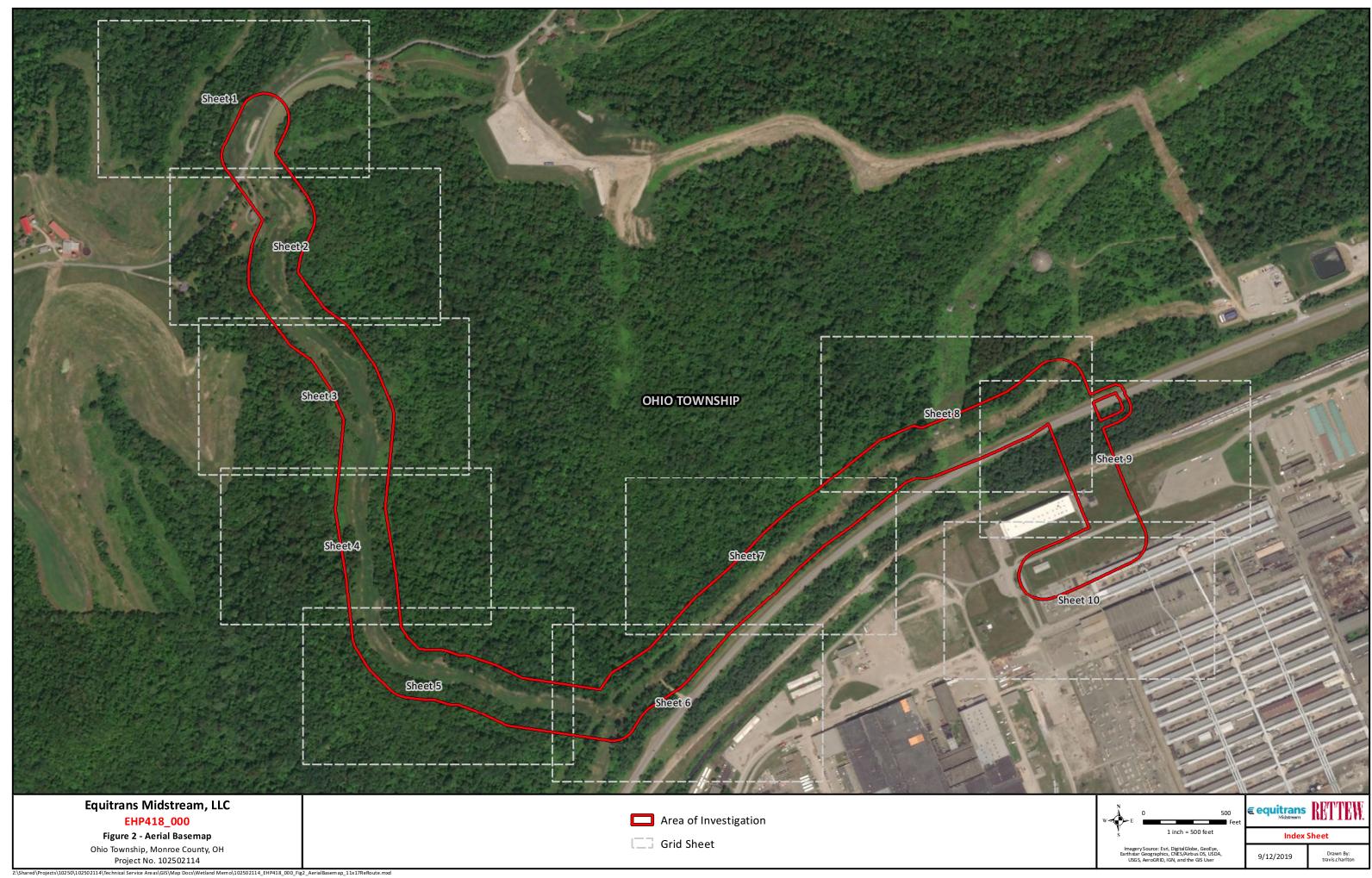
ATTACHMENT A

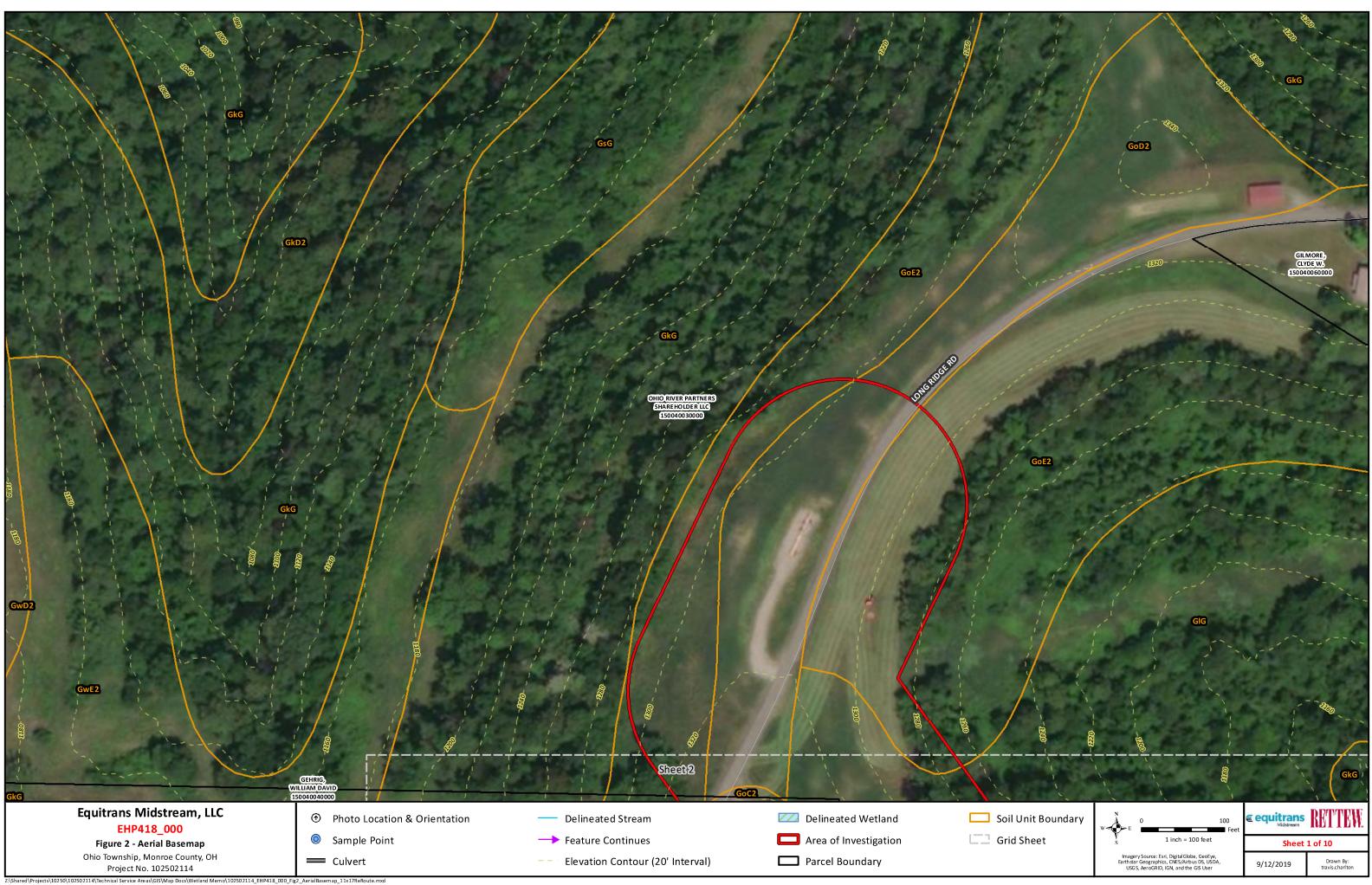
PROJECT MAPPING

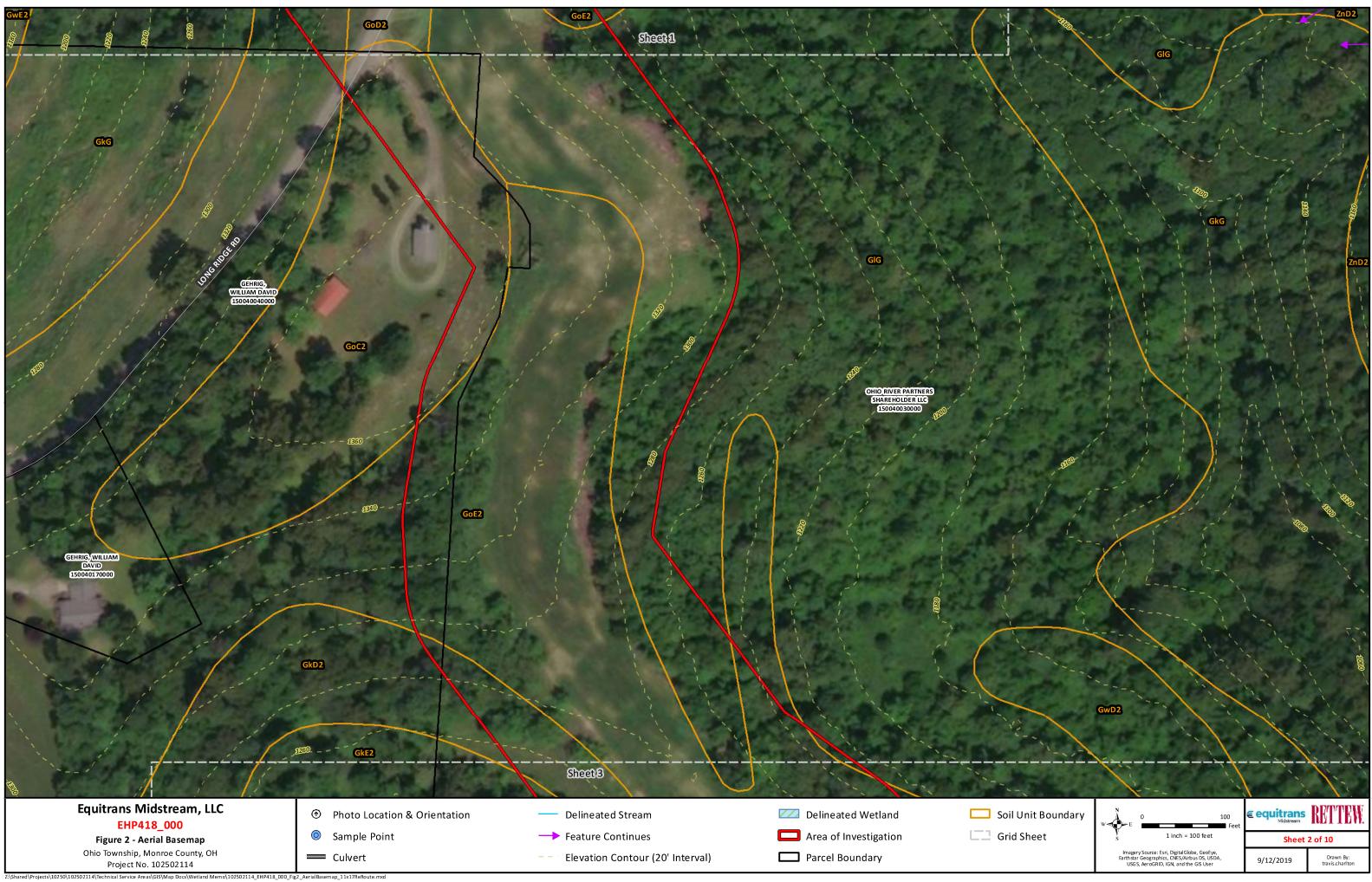


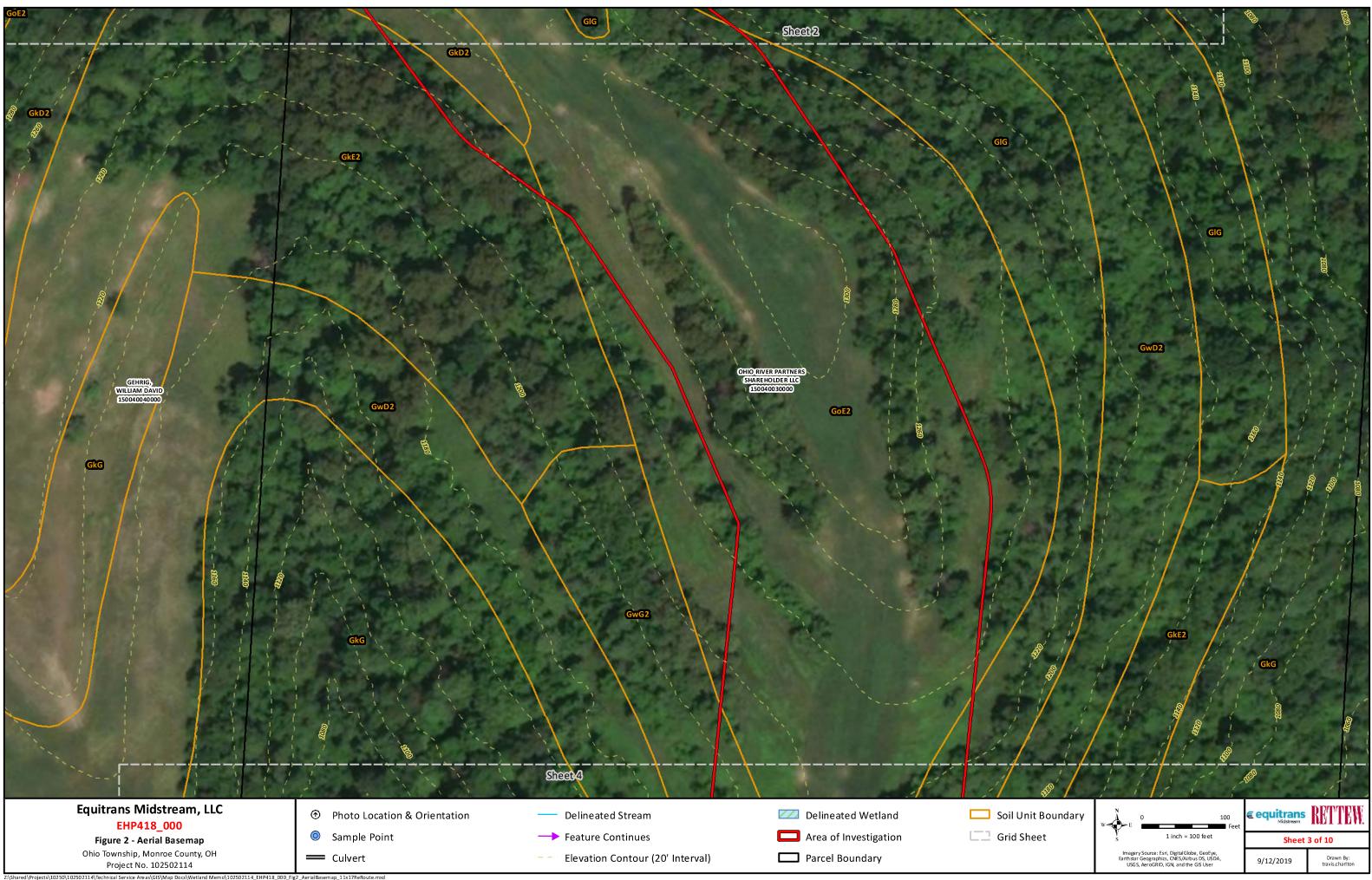


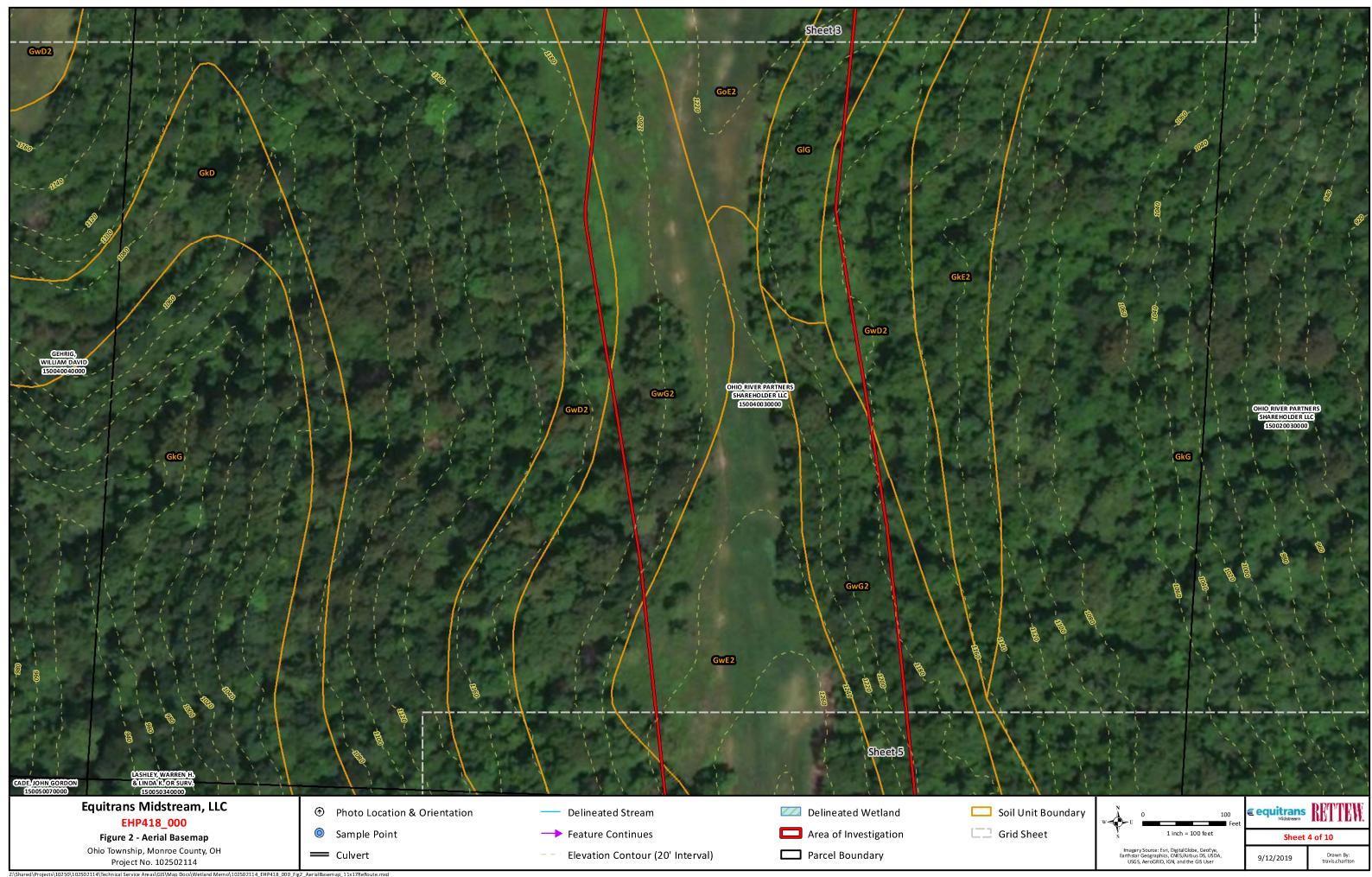
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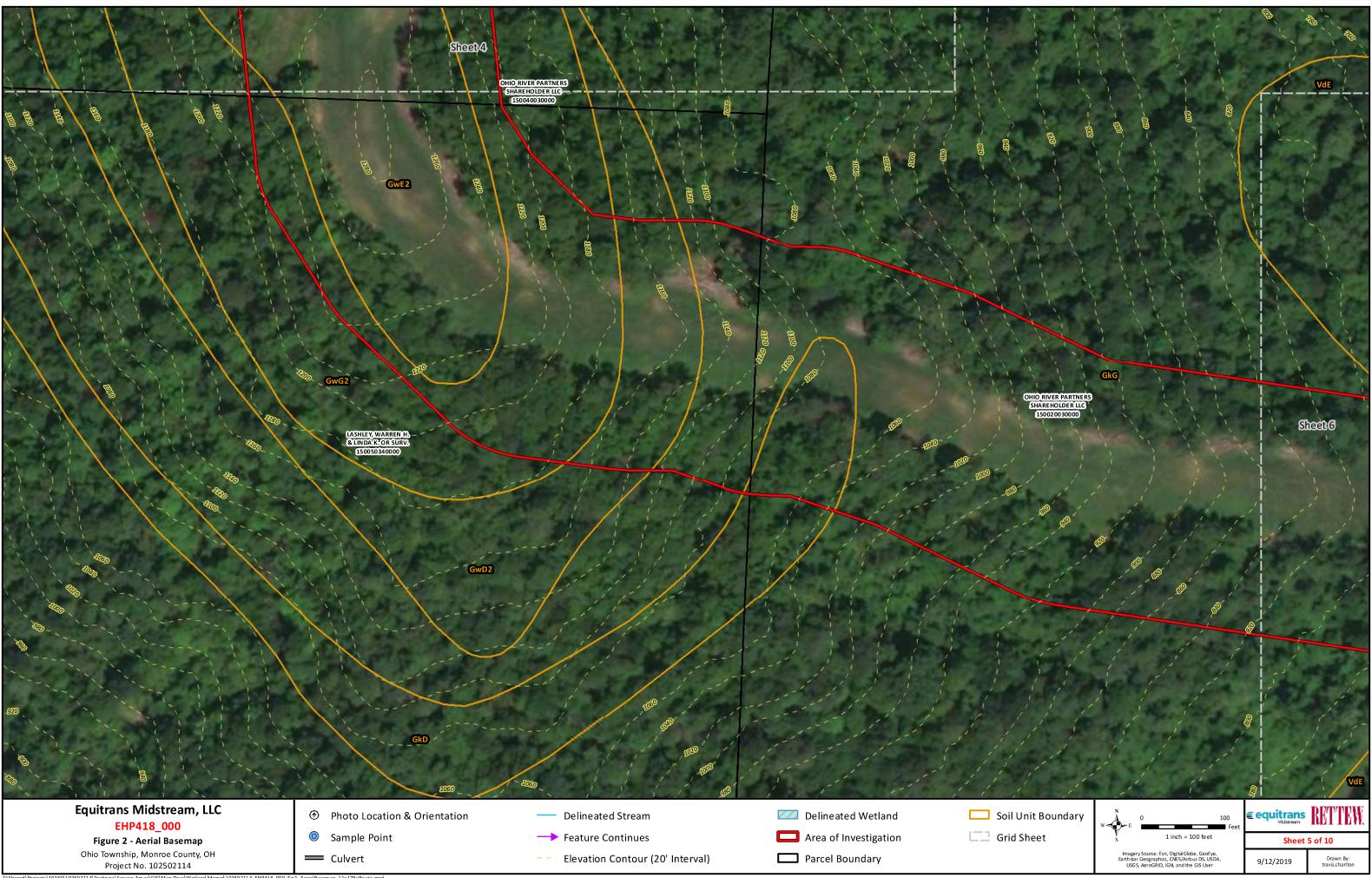




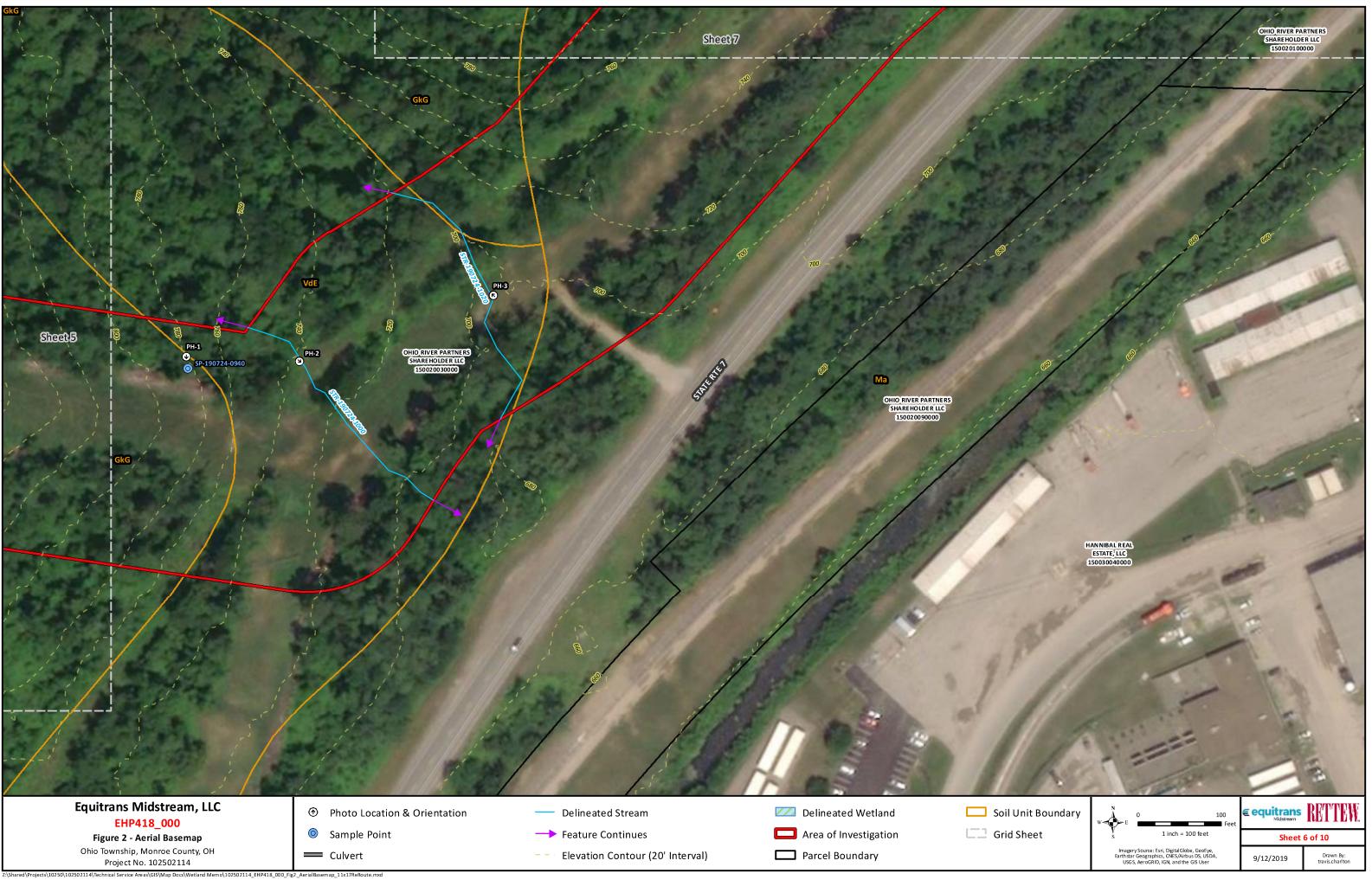


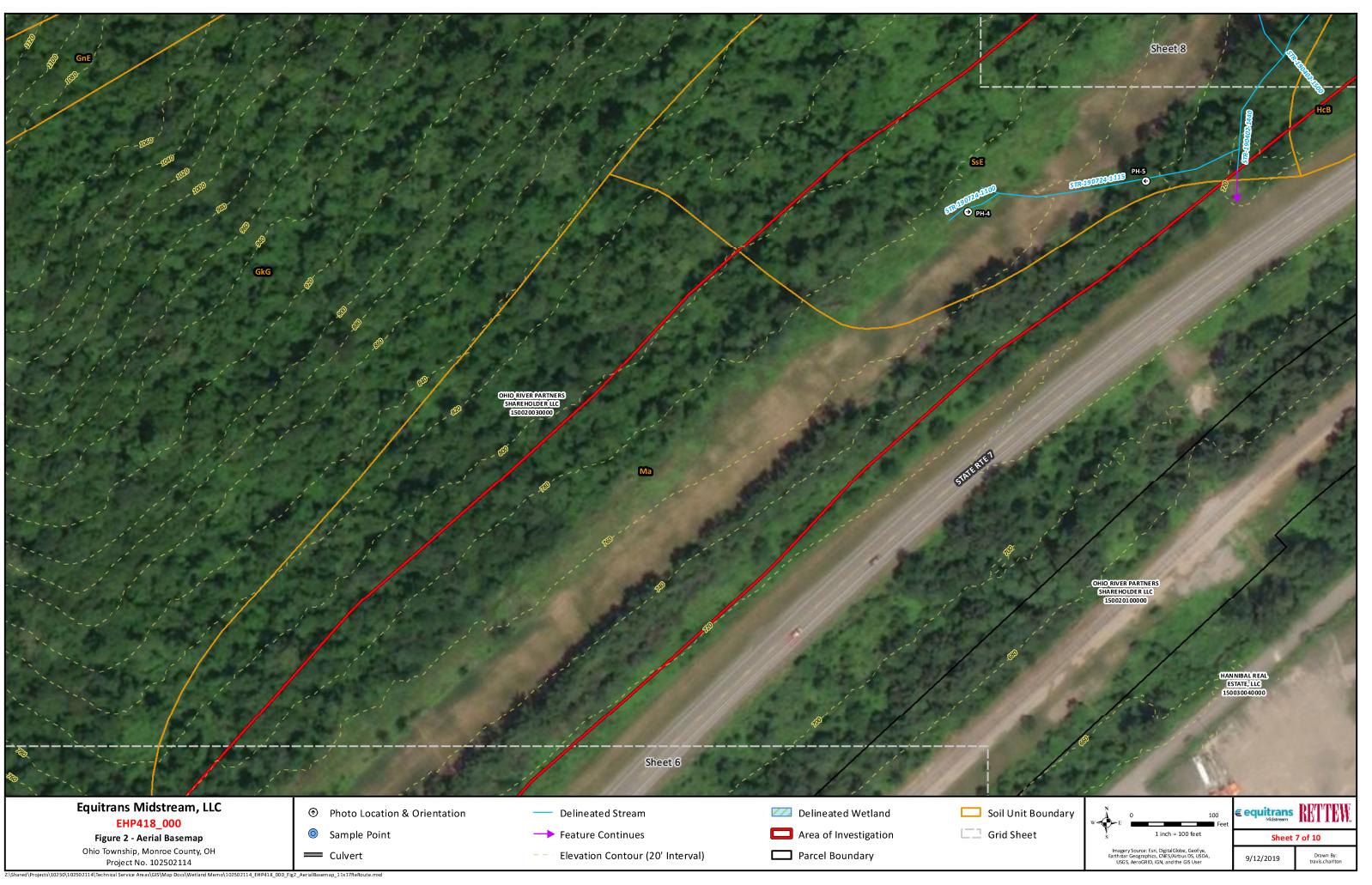


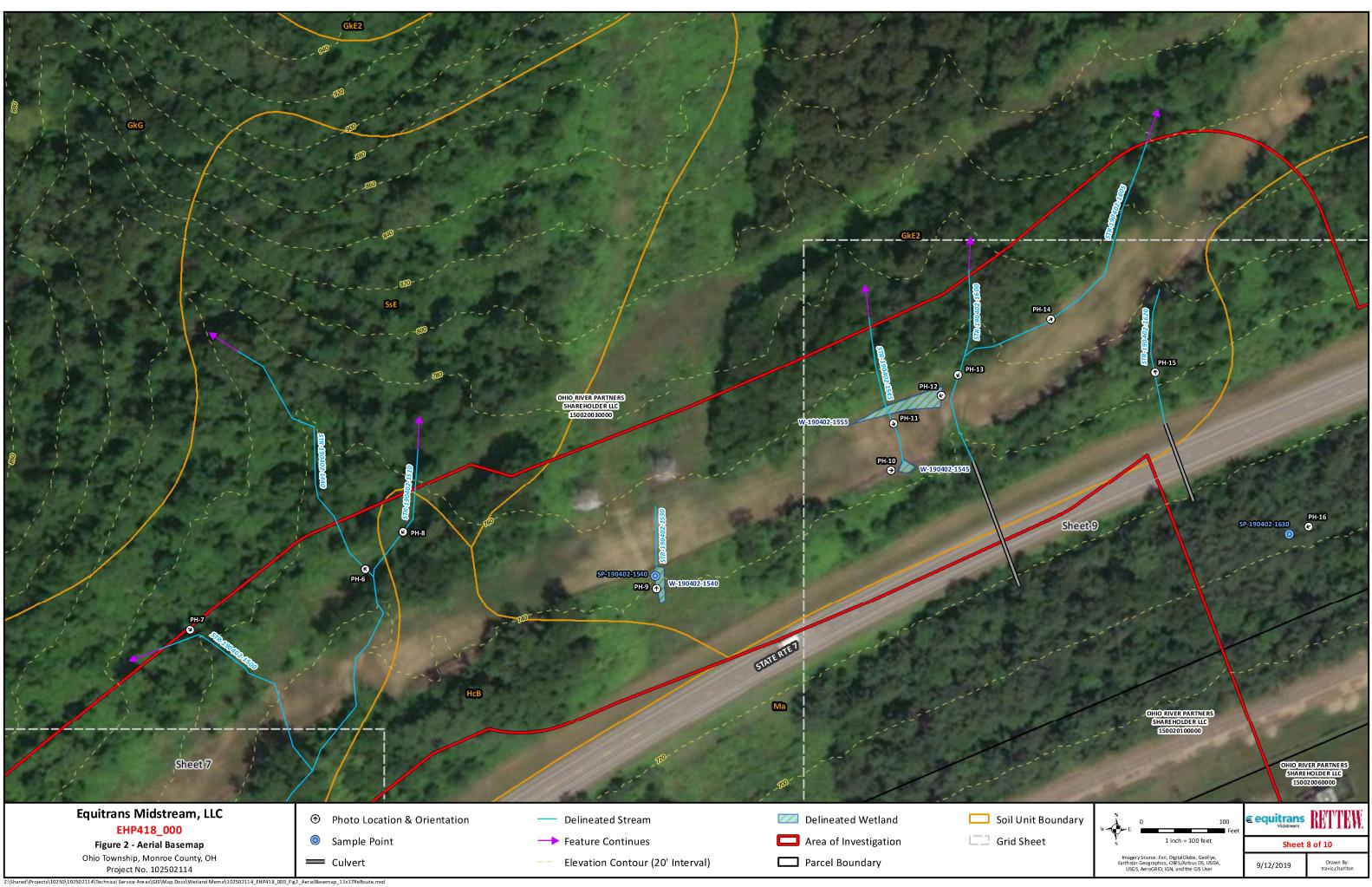


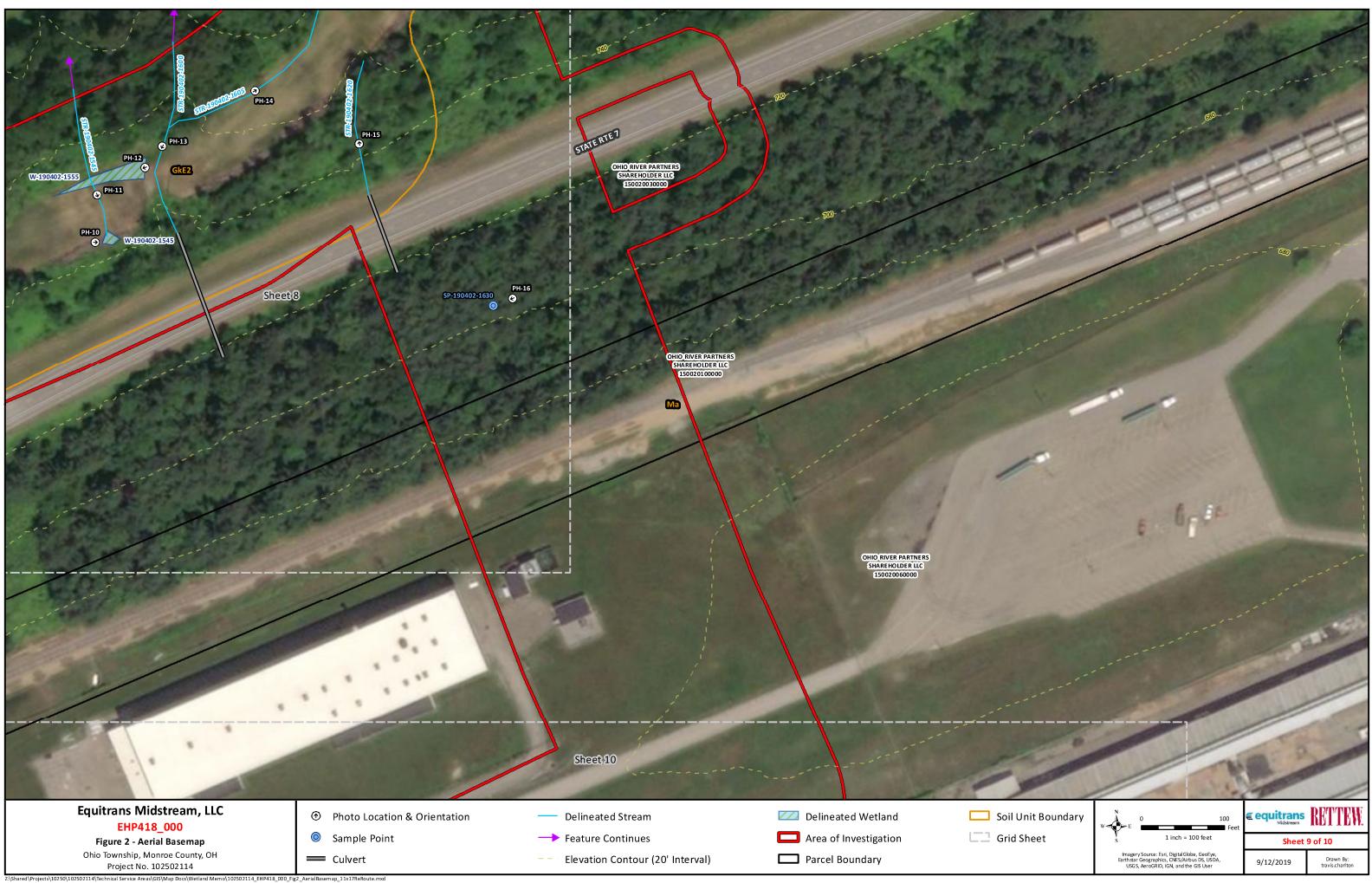


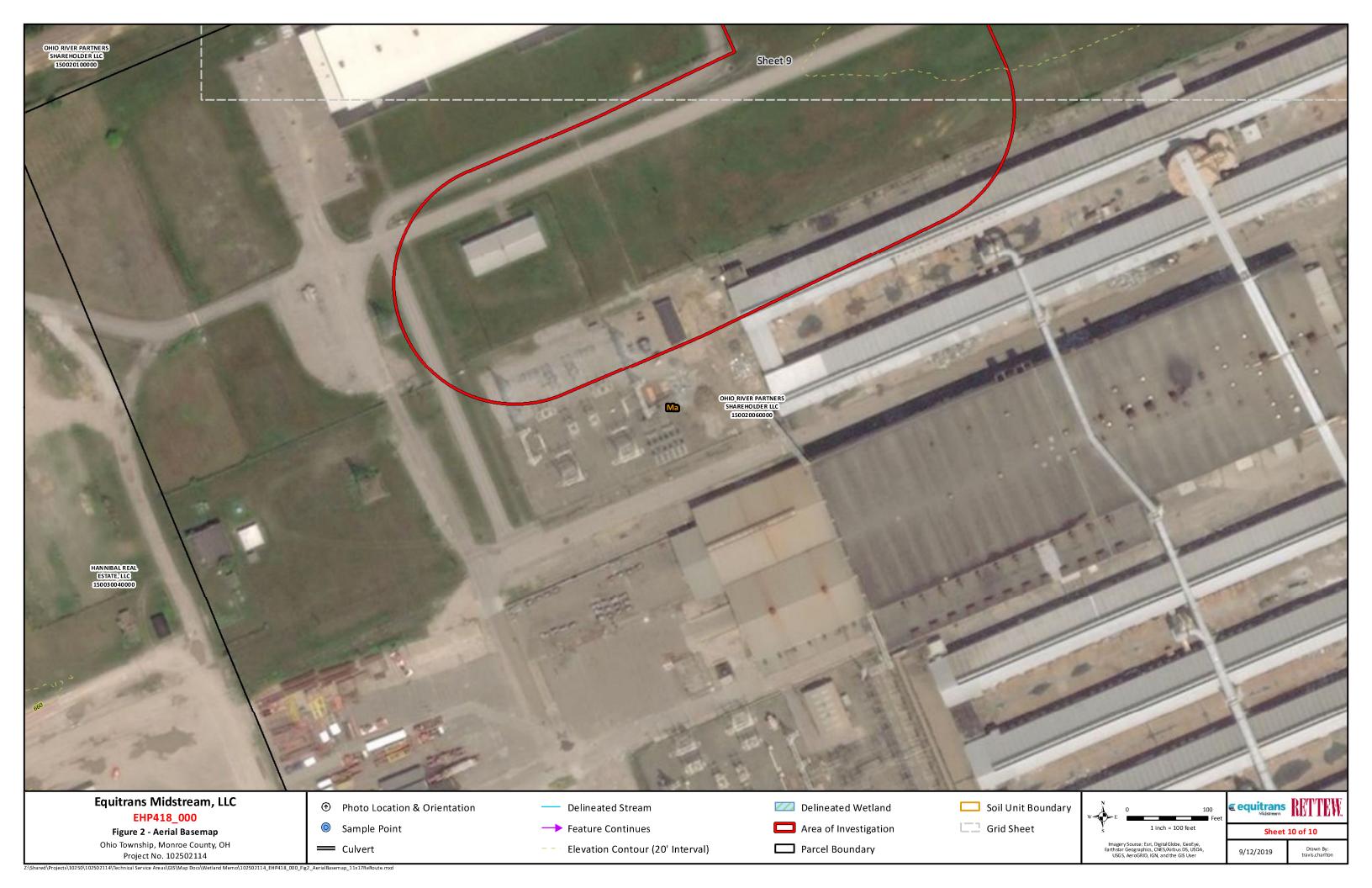
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ATTACHMENT B

WETLAND DETERMINATION DATA FORMS HHEI FORMS ORAM FORMS



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region
Project/Site: EHP 46 City/County: Manse Co- Sampling Date: 4/2/19
Applicant/Owner: Eurora Milshem LLC State: OH Sampling Point 190902-1230
Investigator(s): McClana Section, Township, Range: Ohio Township
Landform (hillslope, terrace, etc.):
Subregion (LRR or MLRA): <u>LRR-N</u> Lat: <u>39.7/2</u> 34.7 Long: <u>80.859/86</u> Datum: <u>NAD83</u>
Soil Map Unit Name GIG-Gilpin-Upsicor complex very step, 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, Soil, or Hydrology significantly disturbed? /// Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? ///> (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
SommArt of Thabladds – Attach site high showing sampling point locations, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes No/_ Is the Sampled Area within a Wetland? Hydric Soil Present? Yes No/_ Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No/_ Is the Sampled Area within a Wetland? Remarks: Compliance point Jocuments decidents decidents decidents
habitat on a hills/ope
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3)Oxidized Rhizospheres on Living Roots (C3)Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5) 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)
Field Observations:
Surface Water Present? Yes NoPepth (inches):
Water Table Present? Yes <u>No</u> Depth (inches):
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes Mo
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Remarks: No indicators of wetland hydrology present.
Present.

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

Sampling Point: 190402-1230

2010	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	<u>% Cover</u> Species2 Status	Number of Dominant Species
1. Liriodendon tulipitera	30 FACU	That Are OBL, FACW, or FAC: (A)
	24 91	(7
2. Quercus rubra	<u></u>	Total Number of Dominant 💦
3. Alsculus flava	12 FACU	Species Across All Strata: 2 (B)
4. OSETVE VIVE. WISHIG	10 000	
- Ustryg ungranding	10 FACU	Percent of Dominant Species
5		That Are OBL, FACW, or FAC: 25 20 (A/B)
6.		
7		Prevalence Index worksheet:
	at	Total % Cover of:Multiply by:
18	= Total Cover	
50% of total cover 38	20% of total cover:	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 1.5 1)		FACW species x 2 =
1. (indera benzoin	IS GAL	FAC species x 3 =
1. C. Making Denzort	<u></u>	
2. Rosa multiflorg	B FACU	FACU species x 4 =
3		UPL species x 5 =
		Column Totals: (A) (B)
4		
5		Bravalanca Index - B/A -
6		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		
9		2 - Dominance Test is >50%
۵	13	3 - Prevalence Index is ≤3.0 ¹
	= Total Cover	4 - Morphological Adaptations' (Provide supporting
50% of total cover: 11-5	20% of total cover: 4.6	
Herb Stratum (Plot size:)	~	data in Remarks or on a separate sheet)
1. Viola Sp. *	SI FA	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Falium mollugo	7 V FACU	
3. Allium cernilium	S FACU	¹ Indicators of hydric soil and wetland hydrology must
		be present, unless disturbed or problematic.
4. Geranium cavolinianum	-> 44	Definitions of Four Vegetation Strata:
5		
		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6		more in diameter at breast height (DBH), regardless of
		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
6		more in diameter at breast height (DBH), regardless of height.
6 7 8		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6 7 8 9		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
6 7 8		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6 7 8 9		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6 7 8 9 10 11		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless
6 7 8 9 10 11		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6 7 8 9 10 11 50% of total cover: 2.4		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless
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11/19/2019 3:18:12 PM

in

Case No(s). 19-1742-GA-BLN

Summary: Letter of Notification Attachment I (Part 1 of 2) electronically filed by Mr. Michael J. Settineri on behalf of Long Ridge Energy Generation LLC