Pleasant Prairie Solar Energy LLC
Case No. 22-122-EL-BLN

Exhibit H
Wetlands and Other Waters of United States Delineation Report
July 2021

DICKINSON WRIGHT PLLC

Cardno

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July 15, 2021

Josh Hreha
Pleasant Prairie Solar Energy LLC
1 S Wacker Dr STE 1800
Chicago, IL 60606

Subject: Regulated Waters Site Assessment Pleasant Prairie Transmission Line Project

Dear Mr. Hreha:

The following summarizes the findings from our recent Regulated Waters Site Assessment of the Pleasant Prairie Solar Energy Transmission Line Project (Transmission Project). The Transmission Project Area consists of approximately 22.1 acre of undeveloped land, located along US40, just west of Cole Road in Prairie Township, Franklin County, Indiana (Figure 1). The Transmission Project consists of the construction of an electric power transmission line of approximately 1.2 miles in length which will connect to the Pleasant Prairie Solar Energy Project.

Methods and Findings

A site assessment was conducted on two separate occasions to identify potential "waters of the U.S." and "waters of the state of Ohio". During an independent study, a 154.6-acre parcel was surveyed by Davey Resource Group (Davey) on January 8, 2020 which includes part of the Transmission Project Area. The Davey Resource Group wetland delineation report has been submitted to the Army Corps of Engineers and the Ohio Power Siting Board. Those overlapping results are presented here. The remaining parcels were surveyed by Cardno on November 6, 2020 (Figure 1. Transmission Project Location). Wetland delineations conducted according to the 1987 U.S. Army Corps of Engineers (USACE) Corps of Engineers Wetlands Delineation Manual (USACE, 1987) and the applicable regional supplements; Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE, 2010) (collectively, the Manual) requires that three wetland criteria be met in order for a wetland to be determined to be present. The area being evaluated must have a dominance of hydrophytic vegetation, hydric soils, and sufficient hydrology to be identified as a wetland. Flowing water features (streams and ditches, but not ponds), in order to be classified as a waterbody, must have a defined bed and bank with indications of a channel flow, and are assigned as perennial, intermittent, or ephemeral based on the definitions in Table 2-2. Furthermore, linear waterbodies are assessed using the Headwater Habitat Evaluation Index (HHEI) from the Ohio EPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA 2018). The HHEI allows for uniform scoring of various waterbodies using a standard methodology that identifies pertinent information about the waterbody including substrates, pool depths, and ecological value or condition. HHEI forms typically are completed for waterbodies with a drainage area of less than 1 square mile..

Stream 1, McCoy Ditch – Davey Resource Group (150-Liner Feet within the Transmission Project Area)

McCoy Ditch (Davey) was characterized as a perennial stream that flowed south through the Transmission Project Area. The dominant substrates were gravel and cobble. McCoy Ditch flows into Hamilton Ditch which flows into Big Darby Creek, a tributary to the Scioto River, a TNW. Due to this hydrologic connection, McCoy Ditch is likely to be considered a jurisdictional “waters of the U.S.”. The QHEI score was 39.50 for McCoy Ditch. Figure 3 – Davey Delineation Map

S301, Hamilton Ditch – Cardno (204-Liner Feet within the Transmission Project Area)

Hamilton Ditch (Cardno) was characterized as a perennial stream that flowed east through the Transmission Project Area. The dominant substrates were sand and gravel. Hamilton Ditch flows into Big Darby Creek, a tributary to the Scioto River, a TNW. Due to this hydrologic connection, Hamilton Ditch is likely to be considered a jurisdictional “waters of the U.S.”. The QHEI score was 48.50 for Hamilton Ditch. Figure 4 – Cardno Delineation Map.

Summary

Based on our site assessment and review of available resource maps there are two regulated waters present within the Pleasant Prairie Solar Energy Transmission Line Project. This represents our best professional judgment based on our knowledge and experience. It is important to note that the Huntington District of the U.S. Army Corps of Engineers has final discretionary authority over all jurisdictional determinations of “waters of the U.S.” including wetlands under Section 404 of the Clean Water Act (CWA) in this region.

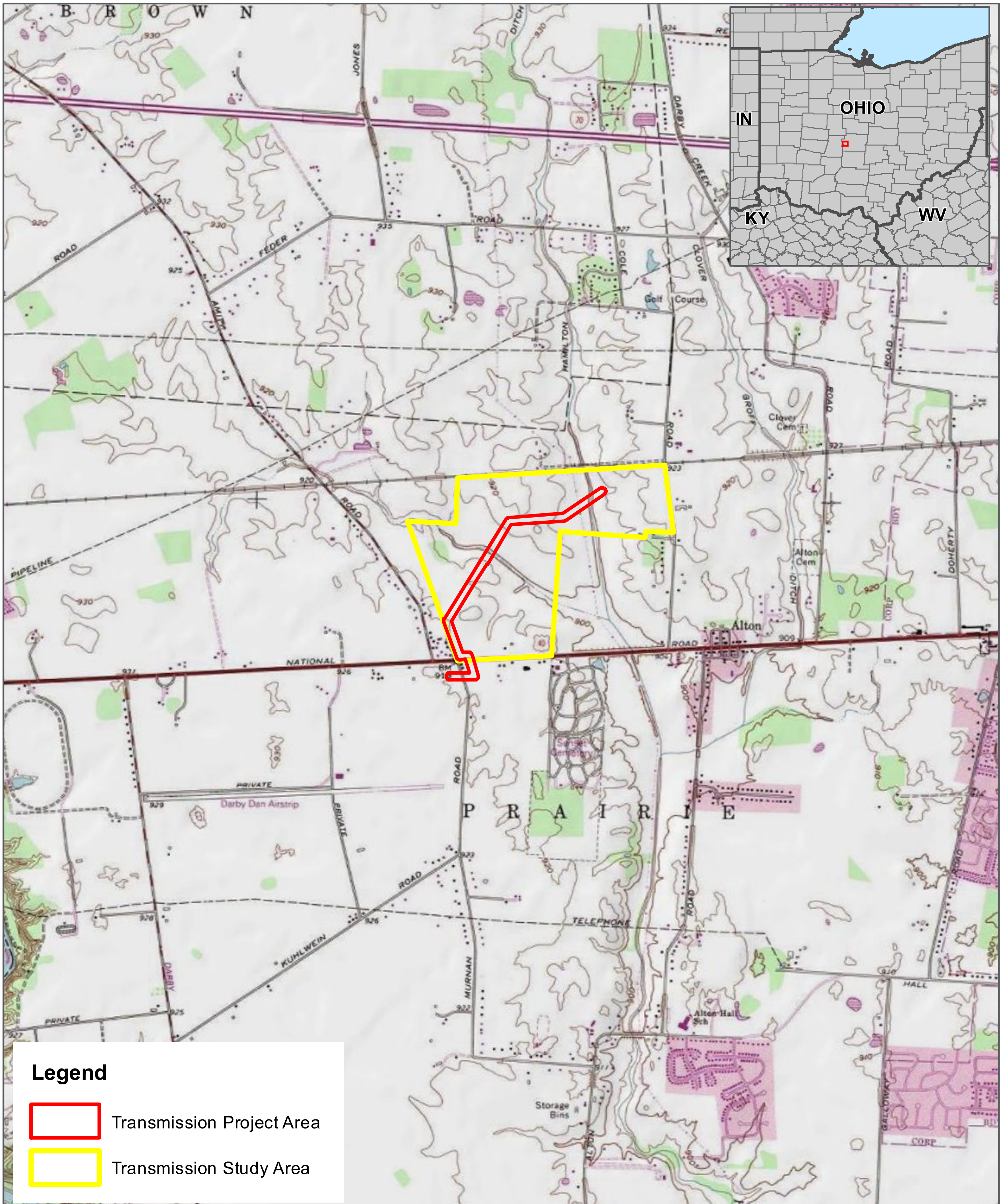
Thank you for the opportunity to be of service. Please feel free to call me if you have any questions regarding our report or if we may be of further assistance.

Sincerely,

Ben Hess
Professional Wetland Scientist
for Cardno
317-388-1982
Email: Ben.Hess@cardno.com

Attachments:
Figure 1. Project Location
Figure 2. Soil Survey
Figure 3. Davey Delineation Map
Figure 4. Cardno Delineation Map

File: E320301701



Legend

Transmission Project Area

Transmission Study Area

Image:ESRI

Project Overview

Pleasant Prairie Solar Transmission Line
Franklin County, Ohio

0 0.5 1 Miles
0 800 1,600 Meters

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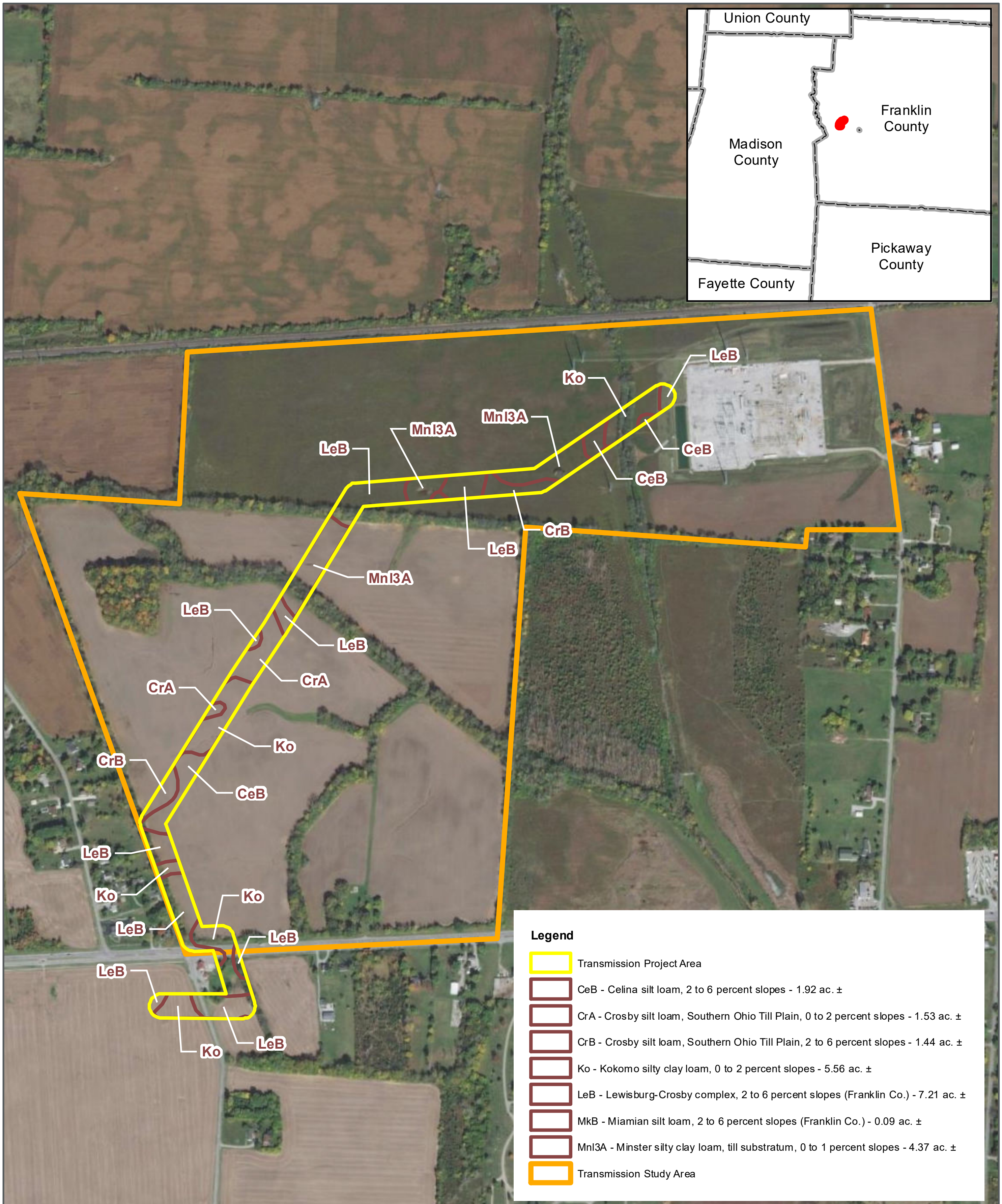

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Image:2020

Soils Map

Pleasant Prairie Solar Transmission Line
Franklin County, Ohio

0 800 1,600 Feet
0 240 480 Meters

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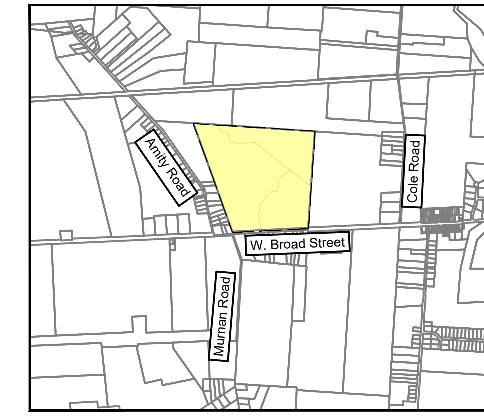
Date Created: 7/13/2021 Date Revised: 7/13/2021 File Path: Q:\UnitedStates\Florida\Tampa\Invenergy\Darby_Creek_Solar_Enery_Center\working\arcmap\Soils_Map_A_1_20210713.mxd
GIS Analyst: James.Bottiger

Appendix B.1
Water Resources Map



NOTE: Wetlands sizes and stream lengths could change upon overlay of a boundary survey, especially where these features extend outside of or are in close proximity to the shown study limits. Wetlands acreage and stream lengths are calculated for the portion that occurs in the shown study limits.

- = Approximate study area
- 1 = Sample point location
- = Perennial stream
- = Intermittent stream
- = Direction of flow

GRAPHIC SCALE

0 250 500

(IN FEET)

Prepared by:	Prepared for:			
DAVEY Resource Group	**Stream + Wetlands Foundation**	154.58 Acres, Hellbranch Run Mitigation Site Prairie Township Franklin County, Ohio	Data used to produce this map were collected on January 8, 2020	Map Sheet 1 of 1

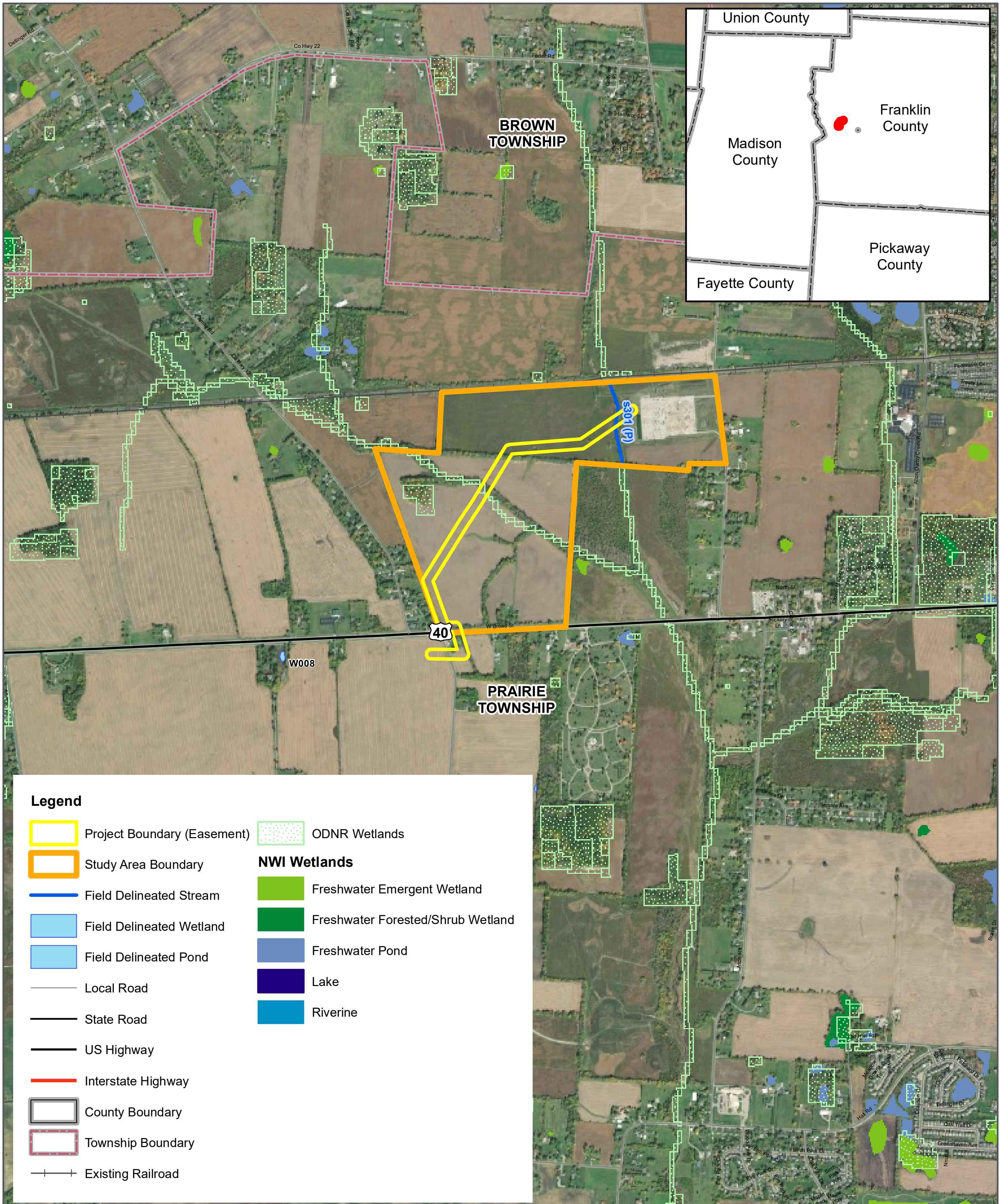


Image:2020

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NWI and ODNR Wetlands Map

Pleasant Prairie Solar Transmission Line
Franklin County, Ohio

0 2,000 4,000 Feet
0 600 1,200 Meters

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Water Resource Delineation Report

Hellbranch Run Mitigation Site
West Broad Street, Prairie Township,
Franklin County, Ohio

April 2020

Prepared for:
Stream + Wetlands Foundation
123 South Broad Street, Suite 238
Lancaster, Ohio 43130

Prepared by:
Davey Resource Group, Inc.
295 South Water Street, Suite 300
Kent, Ohio 44240
800-828-8312

DAVEY
Resource Group

Table of Contents

Tables

Appendices

Executive Summary

The 154.6-acre site is located north of West Broad Street (U.S. 40) in Prairie Township, Franklin County, Ohio. A water resources delineation was performed by Todd Crandall on January 8, 2020.

There are no wetlands within the study area. There is a perennial stream (McCoy Ditch) with a length of 3,091 linear feet on the site. An intermittent unnamed tributary to McCoy Ditch, which has a length of 1,943 also flows through the study area (Table 1). A map showing the location and size of the water resources identified on the property is provided in Appendix B. The study area contains agricultural fields and successional woods. A map showing general plant communities found on the site is in Appendix B.

Table 1. Drainageways Delineated on the Site

Stream	Flow Regime	Length (Linear Feet)	Average Bankfull Width (Feet)	pH
1 (McCoy Ditch)	perennial	3,091	12	7.3
2	intermittent	1,943	6	7.2
Total		*5,034*		

Introduction

Study Area Description and Location

The 154.6-acre site is located in Prairie Township, Franklin County, Ohio (Appendix A). The property is bounded on the south by West Broad Street (U.S. 40).

The study area is located within the Hellbranch Run 12-digit Hydrologic Unit Code (HUC) sub-watershed (HUC 050600012201). This sub-watershed is a component of the larger Upper Scioto 8-digit HUC sub-basin (HUC 05060001).

The property contains active agricultural fields and successional woods.

Secondary Source Information

The property is shown on the Galloway Quadrangle of the United States Geological Survey (USGS) map (Appendix A). Elevations range from approximately 900 to 920 feet across the site.

The National Wetlands Inventory (NWI) map (Galloway Quadrangle) is in Appendix A. Stream 1 (McCoy Ditch) is mapped as a riverine, intermittent, streambed, seasonally flooded system (code R4SBC) on the NWI. A map from the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey showing the soil types located on and adjacent to the site is found in Appendix A. *The Hydric Soils of the United States* (1991) was reviewed to determine potential hydric soils identified within the study area. Kokomo silty clay loam, 0-2 percent slopes and Minster silty clay loam, till substratum, 0-1 percent slopes are identified as hydric soils. Crosby silt loam, southern Ohio till plain, 0-2 percent slopes, Crosby silt loam, southern Ohio till plain, 2-6 percent slopes, Lewisburg-Crosby complex, 2-6 percent slopes, and Miamian silt loam, 2-6 percent slopes have been identified as having hydric inclusions. Table 2 provides a list of soil types mapped for the site.

Table 2. Soil Types Mapped for the Site

Map Unit	Soil Description	Hydric Determination[1]
CeB	Celina silt loam, 2-6 percent slopes	Non-hydric
CrA	Crosby silt loam, southern Ohio till plain, 0-2 percent slopes	Non-hydric with hydric inclusions
CrB	Crosby silt loam, southern Ohio till plain, 2-6 percent slopes	Non-hydric with hydric inclusions
Ko	Kokomo silty clay loam, 0-2 percent slopes	Hydric
LeB	Lewisburg-Crosby complex, 2-6 percent slopes	Non-hydric with hydric inclusions
MkB	Miamian silt loam, 2-6 percent slopes	Non-hydric with hydric inclusions
Mnl3A	Minster silty clay loam, till substratum, 0-1 percent slopes	Hydric

[1]As determined by *The Hydric Soils of the United States* 1991.

Methodology

The Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (U.S. Army Corps of Engineers 2012) were used in delineating wetlands within the study area. The water resources were delineated and surveyed on January 8, 2020. The water resources delineation fieldwork, boundary mapping, and data analysis were performed by Todd Crandall. Juan Barreto and Shawn Bruzda prepared the wetlands maps using AutoCAD® Map 2016 software. Shawn Bruzda prepared the maps included in Appendix A using ArcGIS® v.10.2. Greg Snowden provided technical oversight and quality control.

Streams are identified as linear, flowing water features with a defined bed and bank. Streams are classified as ephemeral, intermittent, or perennial based upon flow regime. Ephemeral streams have flowing water only during, and for a short duration after, precipitation events. Intermittent streams have flowing water during certain times of the year, when groundwater and rainfall provide water for stream flow. During dry periods, intermittent streams may not have flowing water. Perennial streams have flowing water year-round, receiving water from groundwater and rainfall runoff.

Water within actively flowing streams mapped within the study area was sampled and tested to determine stream pH. This evaluation was completed using Hanna Instruments® HI 9828 Multiparameter meter. The multiparameter meter was immersed in water within each stream and upon stabilization of the numbers, the pH was recorded.

Wetlands are identified based on three criteria: vegetation, soils, and hydrology. An area must meet all three criteria to be considered a jurisdictional wetland. Three sampling points were established in the field to determine wetlands boundaries. Data sheets reporting the results of vegetation, soils, and hydrology analyses were completed for each sample point and are located in Appendix E.

Soil samples were obtained to determine the extent of hydric soils on the site. A standard Munsell soil color chart was used to determine the chroma, hue, and value of each soil sample. Soil samples were taken to a depth to adequately make a hydric soil determination. Criteria established by the National Technical Committee for Hydric Soils (1991) were used to determine hydric soils.

Wetland hydrology was characterized during this water resources delineation. Inundation and/or soil saturation were noted for each sample point. Other primary or secondary hydrological indicators, including watermarks, drift lines, sediment deposits, wetlands drainage patterns, blackened leaves, morphological indicators, iron/manganese concretions, and oxidized root zones within the upper soil layers, were documented, if observed.

Quantitative vegetation data were collected at each sampling point. Dominance was estimated by percent areal cover. Four strata were considered for each sample point—trees, saplings/shrubs, herbs, and woody vines. Trees were defined as any woody plant having a diameter at breast height (DBH) greater than 3.0 inches. Saplings and shrubs were those woody plants with a DBH of less than 3.0 inches and greater than 3.2 feet in height. For each stratum, plant species within a plot were identified and percent areal cover was estimated for each species. Thirty-foot-radius plots were used for trees and vines; 15-foot-radius plots were used for saplings and shrubs; and 5-foot-radius plots were used for herbs.

Any species within a stratum comprising 20% or more of the total plot areal cover was considered to be dominant. Dominant species within all strata were then added to determine the percentage of wetlands vegetation for each sample point. The wetlands vegetation criterion was met if greater than 50% of the dominant vegetation was indicative of wetlands conditions.

Species identifications were based on Braun (1989) and Gleason and Cronquist (1991). Lichvar et al. (2016) was used to assign indicator statuses to each identified species. Plants with an indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) were considered to be indicative of wetlands conditions. Plants with an indicator status of facultative upland (FACU) or upland (UPL) were considered to be indicative of upland conditions. Plants that could only be identified to genus were sometimes assigned an indicator status based on the professional judgment of Davey Resource Group. These plants were classified as wetlands indicator species (WIS) or upland indicator species (UIS). See Appendix C for a more detailed explanation of wetlands vegetation indicator statuses.

Marking flags were placed at necessary points around each wetland to accurately depict the wetland upland boundary. The location of each flag was mapped using a GeoXH™ Trimble® GeoExplorer® 6000 series Dual-frequency Global Navigation Satellite System or GNSS (GPS, GLONASS, SBAS [WAAS]) receiver and antenna with Everest™ multipath rejection technology and Floodlight technology. It has 220 channels and runs professional TerraSync™ software capable of decimeter (10–75cm) accuracy after differential correction. Accuracy and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions and as such a specific accuracy cannot be guaranteed in those situations.

Trimble® GPS Pathfinder® Office software was used for postprocessing the GNSS field collected data incorporating Trimble® DeltaPhase™ differential correction technology using GPS data collected from an appropriate base station. The corrected GPS latitude-longitude positions were exported into a compatible coordinate system as an AutoCAD® drawing interchange file (DXF). The vegetation, soils, and wetlands maps included in this report were prepared using AutoCAD Map® 2015 software.

Based upon the 2015 Clean Water Rule (33 CFR 328), which was in effect at the time fieldwork was completed for this site for this site, wetlands that are hydrologically connected to traditional navigable waters of the United States, and wetlands that are located within 4,000 feet of the ordinary high-water mark of a tributary, fall under the federal jurisdiction of the U.S. Army Corps of Engineers (USACE). Wetlands not considered federally jurisdictional are regulated by Ohio Environmental Protection Agency (EPA).

Results

Streams

Two streams flow across the study area. Stream 1 (McCoy Ditch) is a large, 3,091-linear foot perennial stream that flows from west to east across the study area. The substrates of Stream 1 are dominated by sand and gravel while water flowing within Stream 1 had a pH of 7.3. Stream 2 is a small, 1,943-linear foot intermittent stream that flows into Stream 1 on the site. The substrates of Stream 2 are dominated by gravel and sand while water within Stream 2 had a pH of 7.2.

Stream 2 flows into Stream 1 on the site, which flows east off the site, entering Hamilton Ditch just east of the site. Hamilton Ditch flows south and enters Hellbranch Run, a tributary to Big Darby Creek, which in turn flows into the Scioto River. The Scioto River has a watershed area of 6,517 square miles and enters the Ohio River at Portsmouth.

Wetland Vegetation

A map showing the locations of vegetative communities present on the property is in Appendix B. The site contains agricultural fields and successional woods. The agricultural fields were planted in soybeans during 2019. Photographs showing water resources and plant communities identified on the site are included in Appendix D.

Successional Woods. Small areas of successional woods are found on the site, often in association with the riparian corridors along Streams 1 and 2. These areas contain *Celtis occidentalis* (hackberry, FACU), *Acer* negundo (box elder, FAC), *Lonicera tatarica* (Tartarian honeysuckle, FACU), *Gleditsia triacanthos* (honey locust, FAC), and *Ulmus americana* (American elm, FACW).

Wetland Soils

The Hydric Soils of the United States (1991) was reviewed to determine potential hydric soils identified within the study area. Kokomo silty clay loam, 0-2 percent slopes and Minster silty clay loam, till substratum, 0-1 percent slopes are identified as hydric soils. Crosby silt loam, southern Ohio till plain, 0-2 percent slopes, Crosby silt loam, southern Ohio till plain, 2-6 percent slopes, Lewisburg-Crosby complex, 2-6 percent slopes, and Miamian silt loam, 2-6 percent slopes have been identified as having hydric inclusions. Field survey of the on-site soils identified hydric soils generally corresponding to the areas mapped as hydric on the soil survey. The soils within these areas meet the depleted matrix (F3) and redox dark surface (F6) hydric soil indicators.

Wetland Hydrology

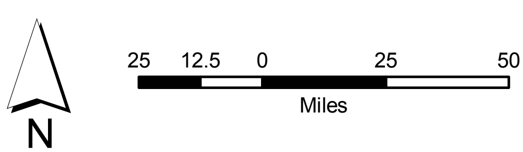
There are no wetlands on the site. Areas of hydric soil have been drained by dredging of the on-site streams in combination with extensive networks of field tiles. Functioning field tiles a were observed at numerous locations along Stream 1.

Conclusions

A map showing the location and size of the water resources identified on the property, along with the locations of sample points, is shown in Appendix B. There are no wetlands on the site. There are 3,091 linear feet of perennial stream and 1,943 linear feet of intermittent stream that flow through the study area.

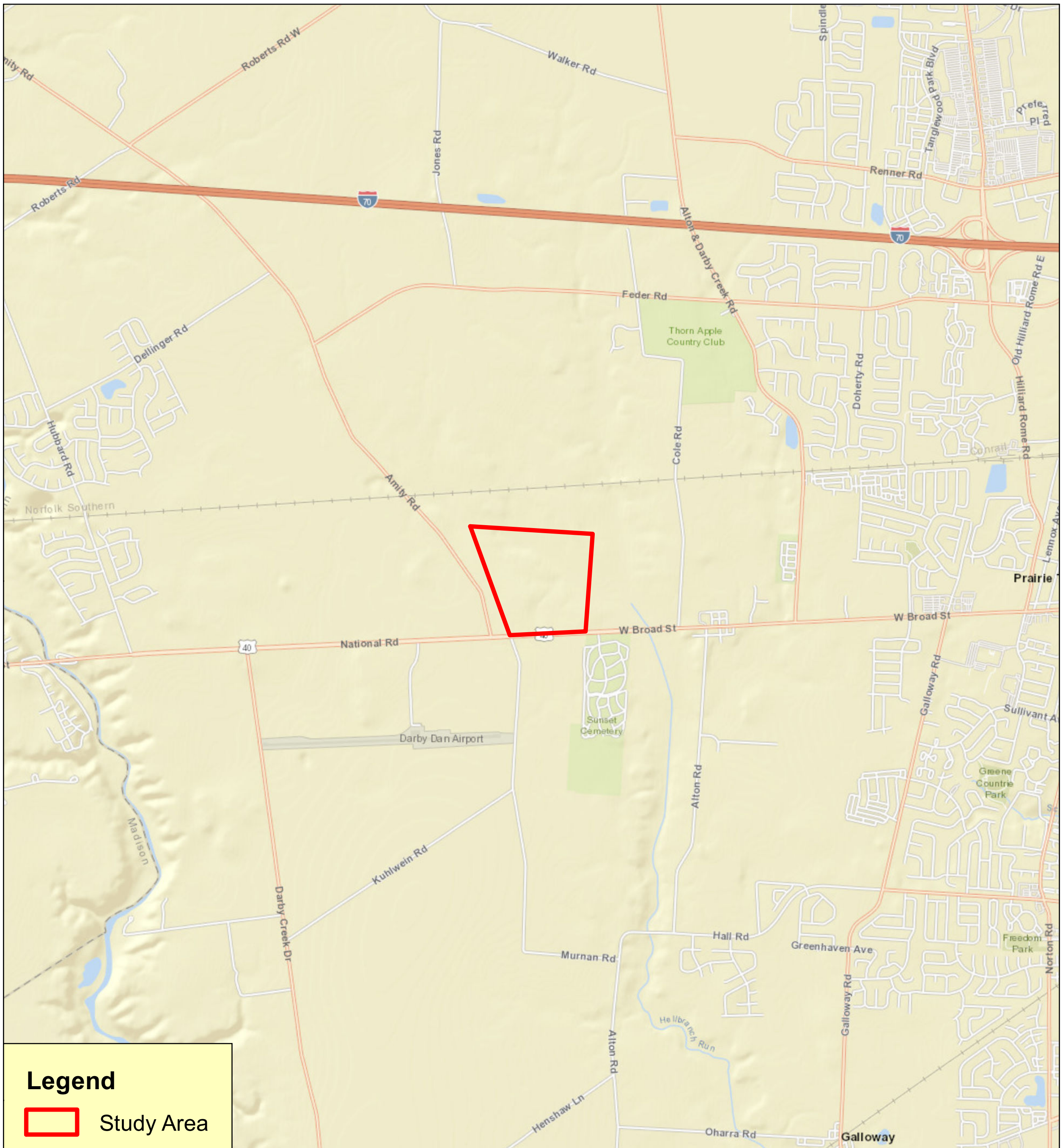
Davey Resource Group is confident that all jurisdictional aquatic resources were identified on this site. No unusual or problem areas were found. All water resource studies conducted by Davey Resource Group are objective and based strictly on professional judgment. Davey Resource Group and its employees have no vested interest in this property or the proposed project. Appendix F contains references used in the creation of this report, and Appendix G provides profiles of all Davey Resource Group personnel who contributed to this report. All wetlands delineations must be verified by the U.S. Army Corps of Engineers to be considered official. This wetlands delineation is reflective of environmental conditions at the time the fieldwork was performed. Wetlands are dynamic natural systems; therefore, boundaries may change slightly over time.

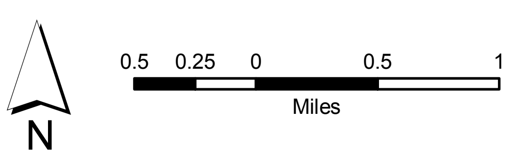
Appendix A.1
Location of Franklin County on Ohio County Map



Site Location: Hellbranch Run
Wetlands Mitigation Bank
Prairie Township
Franklin County, Ohio
Source: Esri
Redlands, California

Appendix A.2
Location of Study Area on Highway Map





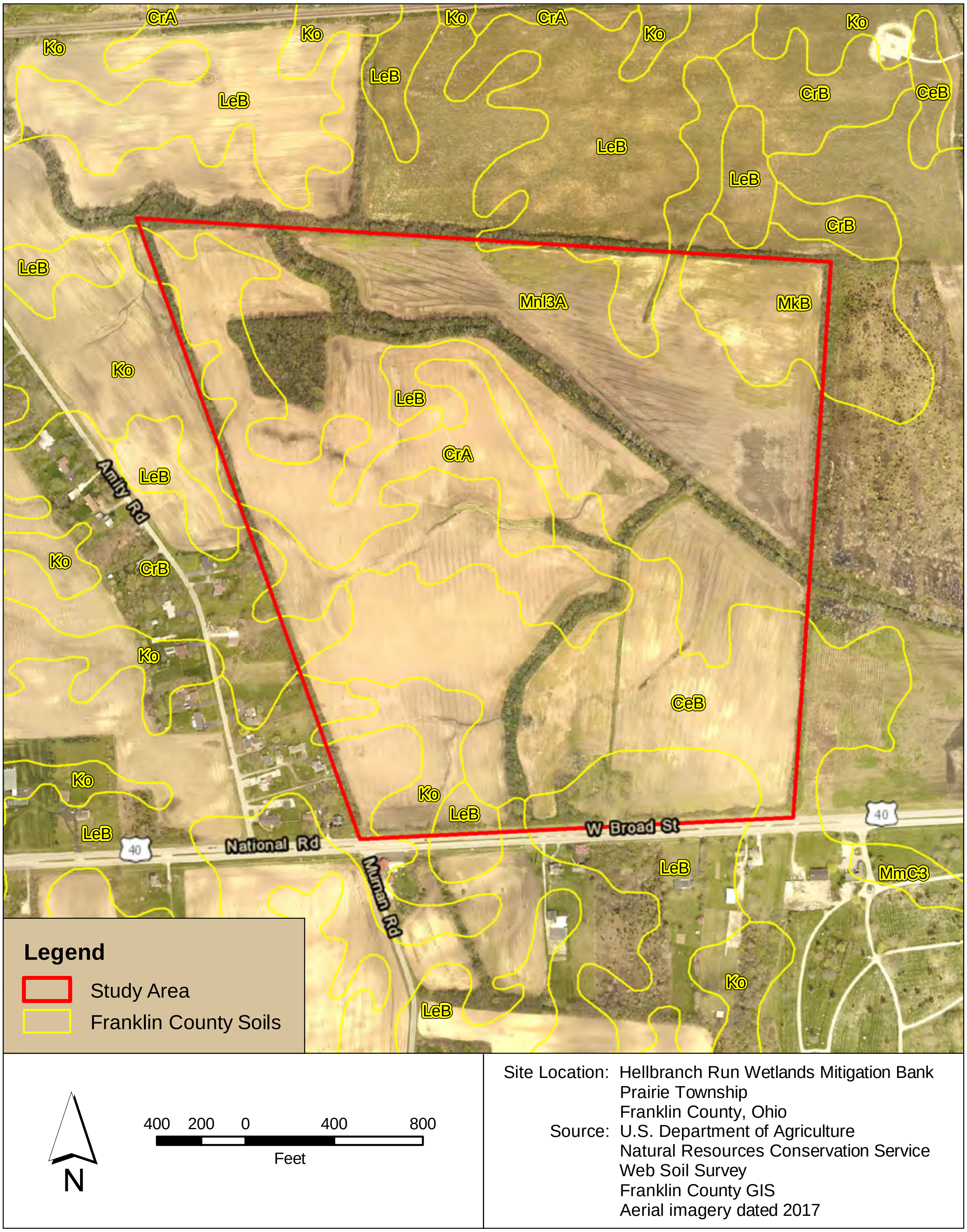
Site Location: Hellbranch Run
Wetlands Mitigation Bank
Prairie Township
Franklin County, Ohio

Source: Esri
Redlands, California

Appendix A.3
Location of Study Area on Franklin County Parcel Map

Site Location: Hellbranch Run
Wetlands Mitigation Bank
Prairie Township
Franklin County, Ohio
Source: SOOIT OGRIP OSIP III
Columbus, Ohio
Aerial imagery dated 2019

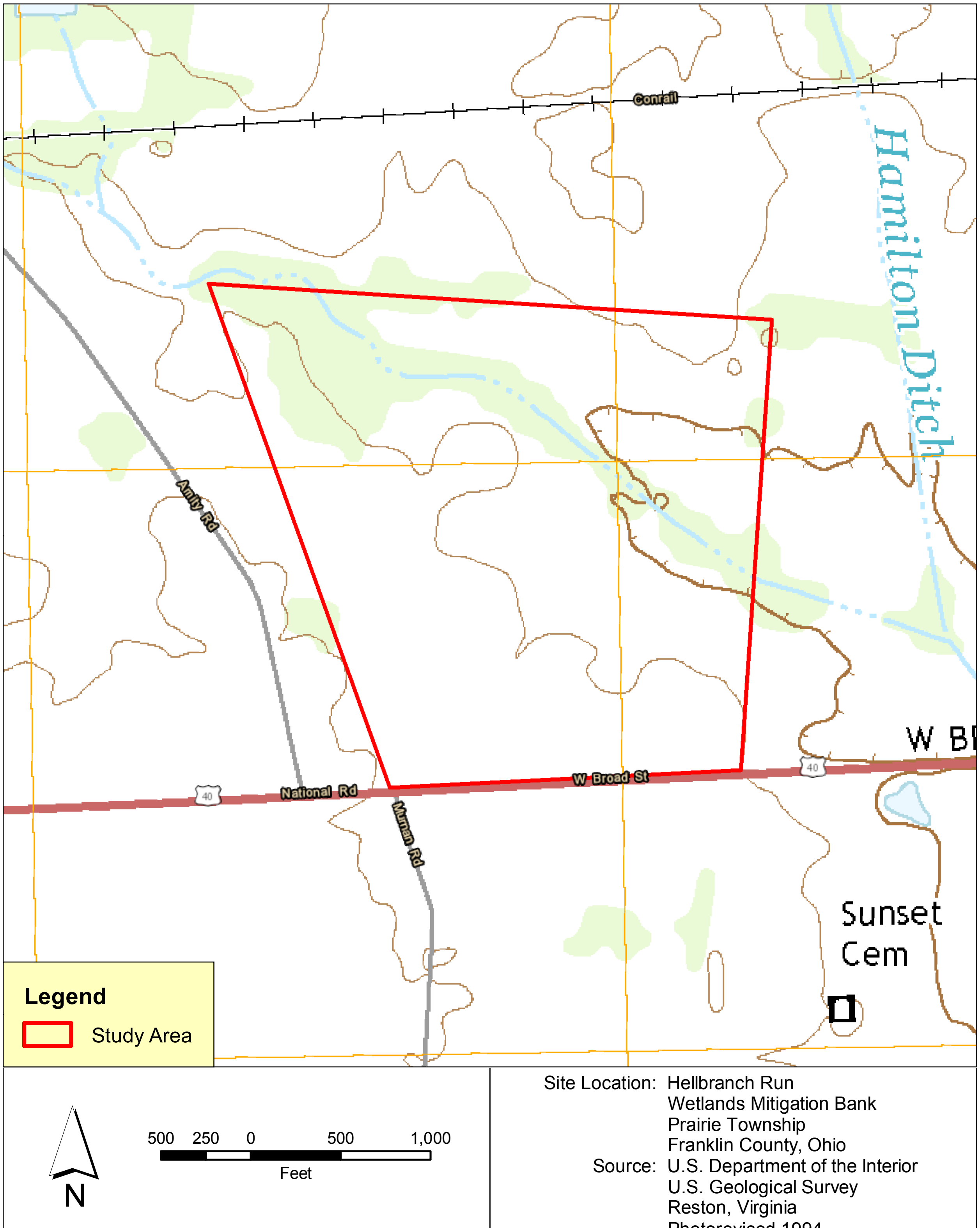
Appendix A.4
Location of Study Area on
Franklin County Soil Survey Map



Site Location: Hellbranch Run Wetlands Mitigation Bank
Prairie Township
Franklin County, Ohio

Source: U.S. Department of Agriculture
Natural Resources Conservation Service
Web Soil Survey
Franklin County GIS
Aerial imagery dated 2017

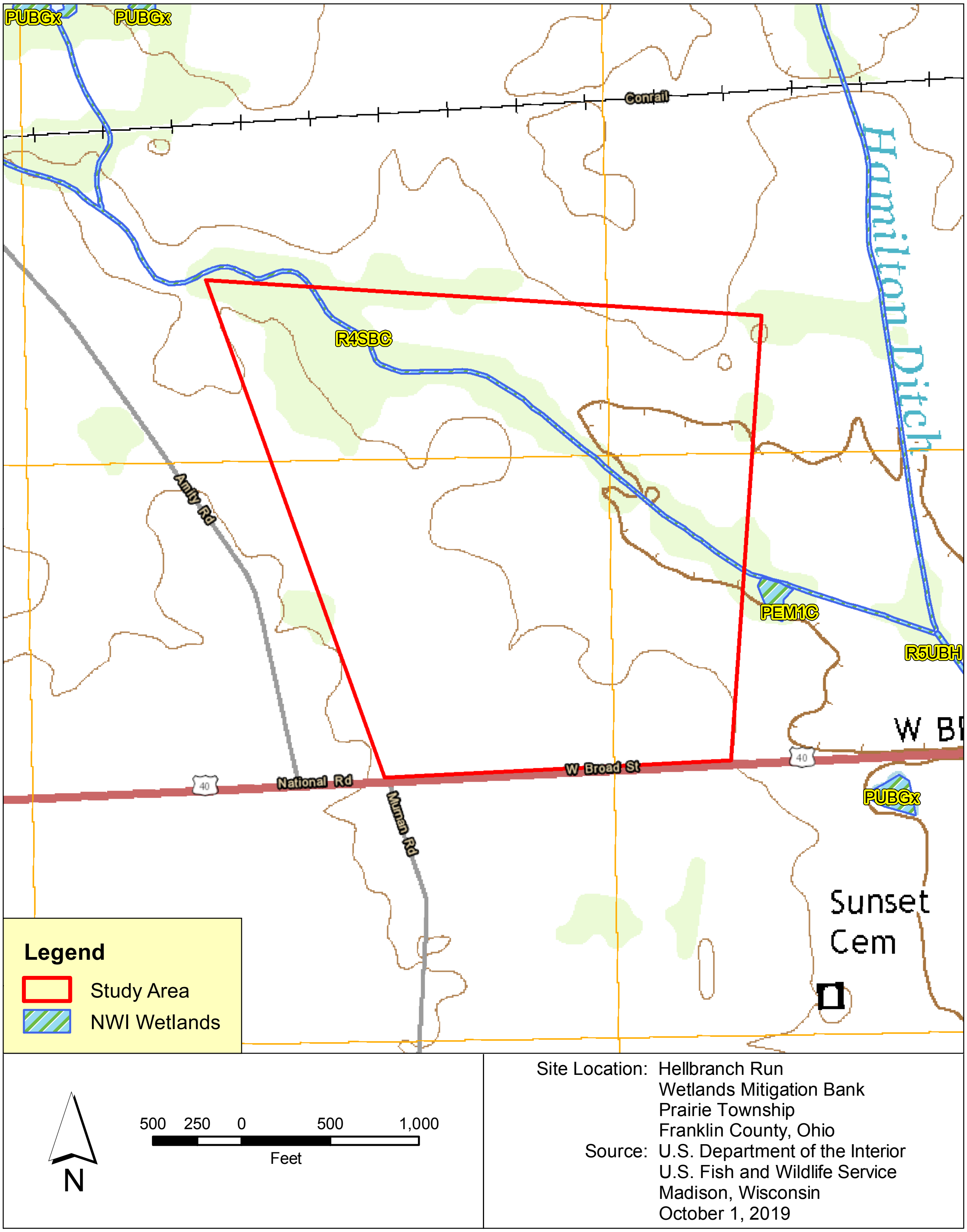
Appendix A.5
Location of Study Area on USGS 7.5-Minute Topographic Map (Galloway Quadrangle)



Site Location: Hellbranch Run Wetlands Mitigation Bank
Prairie Township
Franklin County, Ohio

Source: U.S. Department of the Interior
U.S. Geological Survey
Reston, Virginia
Photorevised 1994

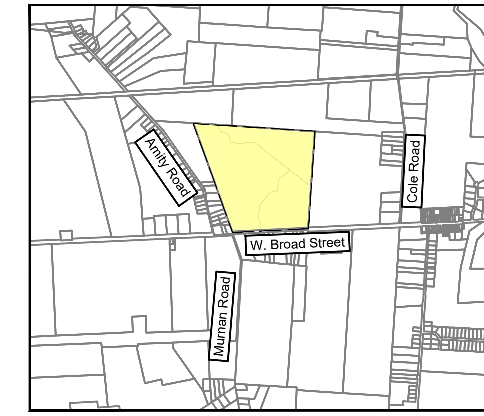
Appendix A.6
Location of Study Area on National Wetlands Inventory Map (Galloway Quadrangle)



Site Location: Hellbranch Run Wetlands Mitigation Bank, Prairie Township, Franklin County, Ohio

Source: U.S. Department of the Interior, U.S. Fish and Wildlife Service, Madison, Wisconsin, October 1, 2019

Appendix B.1
Water Resources Map



NOTE: Wetlands sizes and stream lengths could change upon overlay of a boundary survey, especially where these features extend outside of or are in close proximity to the shown study limits. Wetlands acreage and stream lengths are calculated for the portion that occurs in the shown study limits.

= Approximate study area

1 = Sample point location

= Perennial stream

= Intermittent stream

= Direction of flow

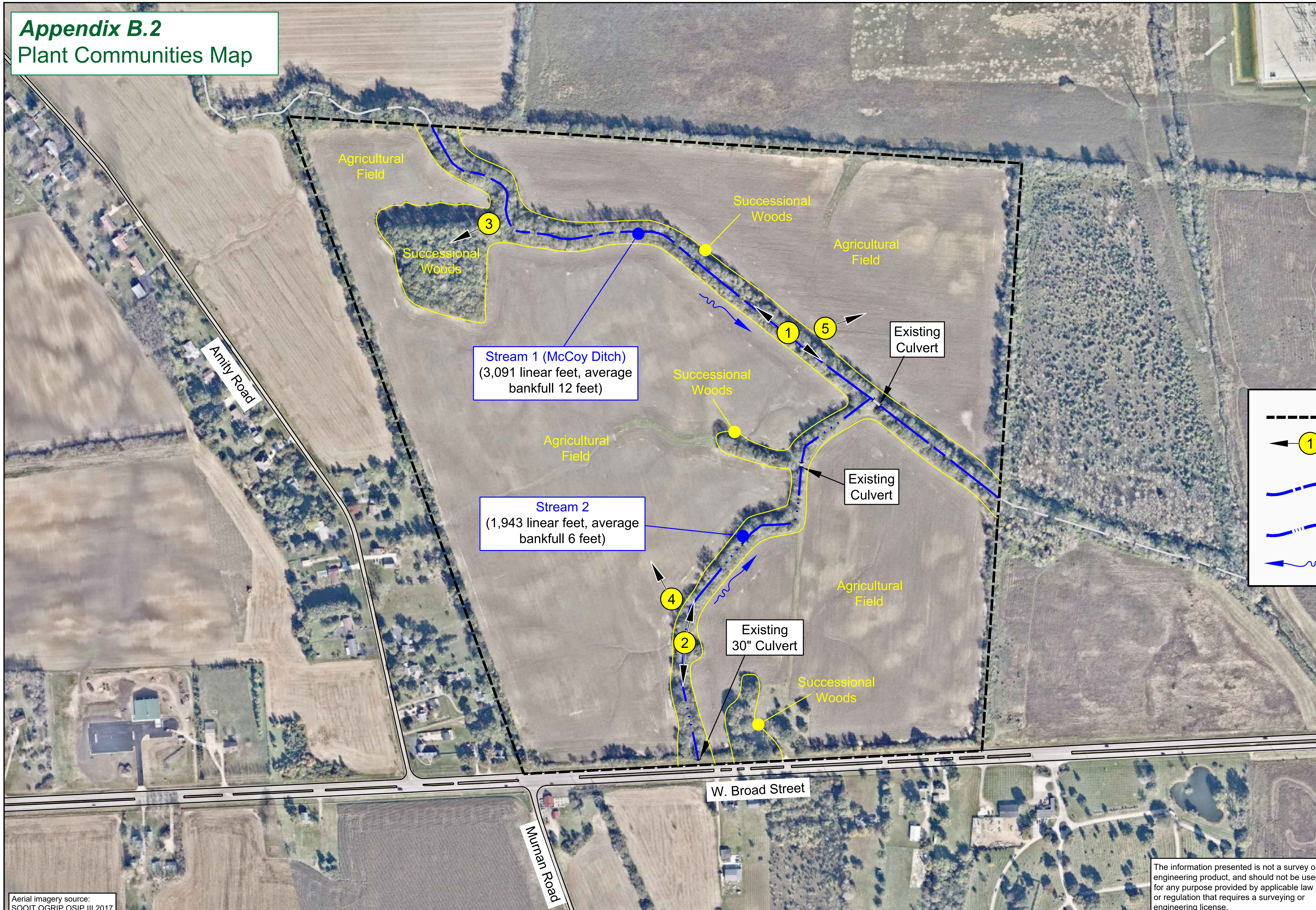
GRAPHIC SCALE

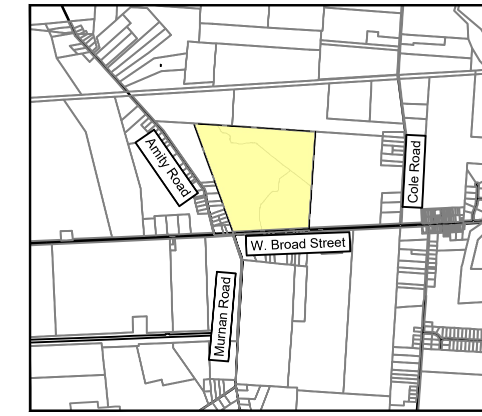
0 250 500

(IN FEET)

Prepared by:	Prepared for:			
DAVEY Resource Group	**Stream + Wetlands Foundation**	154.58 Acres, Hellbranch Run Mitigation Site Prairie Township Franklin County, Ohio	Data used to produce this map were collected on January 8, 2020	Map Sheet 1 of 1

Appendix B.2
Plant Communities Map





NOTE: Wetlands sizes and stream lengths could change upon overlay of a boundary survey, especially where these features extend outside of or are in close proximity to the shown study limits. Wetlands acreage and stream lengths are calculated for the portion that occurs in the shown study limits.

- = Approximate study area
- = Photograph location and direction of view (no arrow view is down).
- = Perennial stream
- = Intermittent stream
- = Direction of flow

GRAPHIC SCALE
0 250 500
(IN FEET)

Prepared by:	Prepared for:			
DAVEY Resource Group	**Stream + Wetlands Foundation**	154.58 Acres, Hellbranch Run Mitigation Site Prairie Township Franklin County, Ohio	Data used to produce this map were collected on January 8, 2020	Map Sheet 1 of 1

Appendix C
Definition of Wetlands Vegetation Indicator Status (from Lichvar et al. 2016)

Obligate Wetlands (OBL). Almost always is a hydrophyte, rarely in uplands.

Facultative Wetlands (FACW). Usually is a hydrophyte but occasionally found in uplands.

Facultative (FAC). Commonly occurs as either a hydrophyte or non-hydrophyte.

Facultative Upland (FACU). Occasionally is a hydrophyte but usually occurs in uplands.

Obligate Upland (UPL). Rarely is a hydrophyte, almost always in uplands.

Species for which little or no information was available to base an indicator status were assigned a no indicator (NI) status. An asterisk (*) after the indicator status indicates that the indicator status was based on limited ecological information.

The wetlands indicator categories should not be equated to degrees of wetness. Many obligate wetlands species occur in permanently or semipermanently flooded wetlands, but a number of obligates also occur, and some are restricted to wetlands that are only temporarily or seasonally flooded. The facultative upland species include a diverse collection of plants that range from weedy species adapted to exist in a number of environmentally stressful or disturbed sites (including wetlands), to species in which a portion of the gene pool (an ecotype) always occurs in wetlands. Both the weedy and ecotype representatives of the facultative upland category occur in seasonally and semipermanently flooded wetlands.

Davey Resource Group has added two additional indicators for situations when plants can only be identified to genus. A Wetlands Indicator Species (WIS) is a plant that is most likely obligate wetlands, facultative wetlands, or facultative. An Upland Indicator Species (UIS) is a plant that is most likely indicative of upland or facultative upland conditions. These additional indicators are used when species identification is not possible. A variety of factors are part of the UIS and WIS assignments. Indicator statuses of all locally occurring members of the genus in question are considered, as are the health and size of the population and the indicator status of nearby plants.

Appendix D
Photographs of Site

Photo location 1 (1-8-20) This is a view of Stream 1 (McCoy Ditch) looking upstream.

Photo location 1 (1-8-20) This is a view of Stream 1 (McCoy Ditch) looking downstream.

Photo location 1 (1-8-20) This is a view of the substrates of Stream 1 showing sand and gravel.

Photo location 2 (1-8-20) This is a view of Stream 2 looking upstream.

Photo location 2 (1-8-20) This is a view of Stream 2 looking downstream.

Photo location 2 (1-8-20) This is a view of the substrates of Stream 2 showing sand and gravel.

Photo location 3 (1-8-20) Small areas of successional woods are found on the site**.**

Photo location 4 (1-8-20) The agricultural fields were planted in soybeans in 2019.

Photo location 5 (1-8-20) Portions of the agricultural fields are underlain by hydric soils. These areas are extensively drained by subsurface field tile.

Appendix E
Vegetation, Hydrology, and Soils Data Sheets

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: McCoy Ditch | City/County: Prairie Township, Franklin County | Sampling Date: 08-Jan-20

Applicant/Owner: Stream + Wetlands Foundation | State: OH | Sampling Point: **01**

Investigator(s): Todd Crandall | Section, Township, Range: S T R

Landform (hillslope, terrace, etc.): Undulating | Local relief (concave, convex, none): concave

Slope: 0.0% / 0.0 ° | Lat.: 39.9537 | Long.: -83.1870 | Datum:

Soil Map Unit Name: Minster silty clay loam | NWI classification:

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.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:
Agricultural field

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5 feet)			
1. Sorghum halepense	30	☑ 100.0%	FACU
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	30	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	30 (A)		120 (B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

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

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 01

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

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR	3/2							Silt Loam	
6-17	10YR	4/2	90	10YR	4/6	10	C	M	Silt Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] 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:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ 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)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches): ____
Water Table Present?	Yes ○	No ◉	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches): ____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No hydrological indicators

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: McCoy Ditch | City/County: Prairie Township, Franklin County | Sampling Date: 08-Jan-20

Applicant/Owner: Stream + Wetlands Foundation | State: OH | Sampling Point: **02**

Investigator(s): Todd Crandall | Section, Township, Range: S T R

Landform (hillslope, terrace, etc.): Undulating | Local relief (concave, convex, none): concave

Slope: 0.0% / 0.0 ° | Lat.: 39.9557 | Long.: -83.1946 | Datum:

Soil Map Unit Name: Minster silty clay loam | NWI classification:

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.

Hydrophytic Vegetation Present?	Yes ◉	No ○
Hydric Soil Present?	Yes ○	No ◉
Wetland Hydrology Present?	Yes ○	No ◉

Is the Sampled Area within a Wetland? Yes ○ No ◉

Remarks:
Successional woods

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30 feet)				
1. Juglans nigra	20	☑	22.2%	FACU
2. Celtis occidentalis	50	☑	55.6%	FAC
3. Ulmus americana	20	☑	22.2%	FACW
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	90	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)				
1. Lonicera tatarica	40	☑	100.0%	FACU
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	40	= Total Cover		
Herb Stratum (Plot size: 5 feet)				
1. Alliaria petiolata	10	☑	100.0%	FAC
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	10	= Total Cover		
Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	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:	5	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	60.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	60	x 3 =	180
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	140 (A)		460 (B)

Prevalence Index = B/A = 3.286

Hydrophytic Vegetation Indicators:

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

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 02

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

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR	2/3							Loam	
4-17	10YR	4/3	90	10YR	4/6	10	C	M	Silt Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] 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:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ 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)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ●	Depth (inches):
Water Table Present?	Yes ○	No ●	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ●	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks:

No hydrological indicators

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: McCoy Ditch City/County: Prairie Township, Franklin County Sampling Date: 08-Jan-20

Applicant/Owner: Stream + Wetlands Foundation State: OH Sampling Point: **03**

Investigator(s): Todd Crandall Section, Township, Range: S T R

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): flat

Slope: 0.0% / 0.0 ° Lat.: 39.9542 Long.: -83.1897 Datum:

Soil Map Unit Name: Minster silty clay loam NWI classification:

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.

Hydrophytic Vegetation Present?	Yes ( )	No (•)
Hydric Soil Present?	Yes ( )	No (•)
Wetland Hydrology Present?	Yes ( )	No (•)

Is the Sampled Area within a Wetland? Yes ( ) No (•)

Remarks:
Agricultural field

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	0	= Total Cover		
Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0.000

Hydrophytic Vegetation Indicators:

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

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ( ) No (•)

Remarks: (Include photo numbers here or on a separate sheet.)
No vegetation

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 03

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

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR	3/3							Silt Loam	
8-17	10YR	4/3	95	10YR	4/6	5	C	M	Silt Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] 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:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ 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)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No hydrological indicators

Appendix F
References

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Appendix G
Davey Resource Group Personnel Profiles

Juan Barreto is an environmental scientist with over 10 years of experience in design, construction, surveying, and natural resources. Mr. Barreto has experience in all aspects of stream restoration projects including restoration design, planting and reforestation, and construction management and oversight. He performs water resource assessments, endangered species habitat evaluations, reptilian surveys, erosion and sediment control inspections, and monitors mitigation and restoration projects to ensure that ecological design goals are achieved. Mr. Barreto develops Stormwater Pollution Prevention Plans (SWPPP) and is proficient with AutoCAD® and GIS software. He is responsible for AutoCAD® mapping operations for natural resource studies.

Shawn Bruzda is a biologist and urban forester with Davey Resource Group. Having served in this capacity for 17 years, Mr. Bruzda focuses on ecological surveys involving fish and macroinvertebrate identification and data analysis. He works on large- and small-scale bat survey projects, including mist-net surveys, habitat evaluations, bat acoustics, and radio tracking studies to determine foraging patterns and roost tree locations; endangered species and habitat studies; invasive species management; and water quality studies. Mr. Bruzda uses AutoCAD® Map 3D and Civil 3D 2016 and ArcGIS™ 10 software to create maps for a variety of natural resource projects. He performs all types of tree inventories and has extensive knowledge of tree risk assessment and tree identification, specifically deciduous and coniferous trees and palms of the Southern United States (USDA Hardiness Zones 7-10). Mr. Bruzda is also experienced with handheld and pen tablet GIS and GPS data collection units and their respective software applications. He has participated in data collection for i-Tree Streets developed by the U.S. Forest Service. Mr. Bruzda also assists with tree preservation and planting plans, as well as tree appraisals and soil analyses. Mr. Bruzda is a certified member of the National Cadre of Tree Measurers for American Forests. As a member, he is responsible for advanced tree measuring to ensure the accuracy of measurements submitted to the American Forests Champion Trees national register in the U.S. Mr. Bruzda also measures Ohio's Champion Trees for the Ohio Department of Natural Resources (ODNR) Division of Forestry registry. He is an International Society of Arboriculture Certified Arborist (OH-1342A) and is also Tree Risk Assessment Qualified (TRAQ) through ISA. Mr. Bruzda is a graduate of Kent State University, where he has a bachelor's degree in biological sciences with an emphasis in aquatic ecology.

Todd Crandall, M.En., is a senior wetlands biologist with Davey Resource Group. Mr. Crandall has 26 years of experience performing wetland delineations in Ohio, Indiana, Pennsylvania, New Jersey, New York, and West Virginia. He performs ecological surveys, vegetation cover mapping, plant identification, and Section 401/404 and isolated wetlands permitting. He also helps plan and design restoration wetlands and prepares wetland mitigation reports. Mr. Crandall is responsible for vegetation monitoring at numerous wetland mitigation sites throughout Ohio. He has completed large-scale wetlands and natural resource inventories for the Cuyahoga Valley National Park, as well as Cuyahoga, Medina, Portage, and Summit Counties in Northeast Ohio. Mr. Crandall is a Qualified Mussel Surveyor for Reconnaissance of Group 1 Systems through the Ohio Department of Natural Resources (ODNR), Division of Wildlife (DOW). He is prequalified in Ecological Surveys through the Indiana Department of Transportation (INDOT). Mr. Crandall is also prequalified in Ecological Surveys and Stream and Wetland Mitigation through the Ohio

Department of Transportation (ODOT). He is a Professional Wetland Scientist (#000353) through the Society of Wetlands Scientists and is a certified U.S. Army Corps of Engineers wetland delineator. Mr. Crandall has a master's degree in environmental science from Miami University and a bachelor's degree in biology from Hiram College.

Greg Snowden, M.S., P.W.S., is a senior biologist with Davey Resource Group. Mr. Snowden specializes in aquatic resource regulations related to wetland and stream permitting and compensatory mitigation. He manages complex development and mitigation projects and is well versed in the requirements of Sections 404 and 401 of the Clean Water Act, state isolated wetland laws, the Food Security Act, and the National Environmental Policy Act. He has successfully facilitated regulatory approval of large and complex residential, commercial, healthcare, and transportation projects, guiding them from inception to completion while ensuring clients are provided with innovative and timely solutions to meet their goals. Mr. Snowden has extensive experience and knowledge of the 2008 Federal mitigation rule (33 CFR 332) related to the establishment and operation of in-lieu fee programs and mitigation banks. He has prepared numerous in-lieu fee program instruments and coordinated their review and approval with state and federal natural resource agencies on the Ohio Interagency Review Team. In addition to his project management responsibilities, Mr. Snowden performs several types of ecological fieldwork, including wetland and stream delineations; aquatic resource habitat assessments; Ohio Department of Transportation (ODOT) ecological surveys; endangered species surveys; restoration project construction and planting oversight; vegetation surveys; and compensatory mitigation project monitoring. Mr. Snowden is ODOT prequalified for environmental document preparation – CE, Ecological Surveys, Stream and Wetland Mitigation, and Waterway Permits. He is a Professional Wetland Scientist and a Level 2 Qualified Data Collector, Stream Habitat Assessment through Ohio EPA. Mr. Snowden has presented on Clean Water Act regulatory issues at numerous professional meetings at the local, regional, and national levels. Mr. Snowden has a master's degree in biological sciences from the University of Notre Dame and a bachelor's degree in environmental and plant biology from Ohio University's Honors Tutorial College.