

Report Information

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Calumet Segment

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Wetland Delineation Report

Marquette Greenway Trail, Calumet Section

1.0 Introduction

Porter County is working to construct a portion of the Marquette Greenway Trail, a bike and pedestrian path, along the south shore of Lake Michigan. When complete, the 58-mile trail will run from Chicago, Illinois to New Buffalo, Michigan. This wetland delineation covers a portion of the trail that runs through the towns of Porter and Beverly Shores: a 6.8-mile section of trail. This route will develop a paved trail from the Dune Park Train Station at Highway 12 and State Road 49 in the town of Porter to Lake Shore County Road in the town of Beverly Shores.

Wetlands and waterways were identified and delineated with a 208-acre project area and the trail route and project limits were adjusted based on where wetlands and high-quality resources were identified. Porter County, in coordination with the Indiana Dunes National Park (IDNP), had intended to route the trail entirely through IDNP land but after wetland limits were identified, a portion of the trail will be routed along the existing Calumet Trail corridor within NIPSCO property.

The 208-acre project area includes the Great Marsh interdunal wetland complex and the Glenwood Dunes Forest system just to the south. Within the Glenwood Dunes are interdunal wetlands, depressional forested wetland, and a mesic/floodplain forest complex along Dunes Creek. The trail will run on the Calumet Trail and through old roadbeds within Beverly Shores then cross south across Highway 12 at Kemil Road. The trail will then run west along dune ridges, cross through an interdunal wetland complex on an existing roadbed, then run along the edge of the roadbed along Furnessville Road and Hadenfelt Road. From there, the trail runs through dune forest, over Dunes Creek, through more dune forest until it ends at State Road 49 and ties into an existing trail on the east side of the road.

The following report documents the jurisdictional and non-jurisdictional features within the identified project limits for the Marquette Greenway Trail project within the Town of Burns Harbor. Figures and appendices are included at the end of the report.

1.1 Project Location

The project area described in this report consists of a large area within the property of the Indiana Dunes National Park that stretches from north of the Calumet trail between Lakeshore County Road to Lakeshore Drive, south across Highway 12 to Teale Drive to the west and then west along Furnessville Road and ending at the junction of US 49 and Highway 12. The sections for the project area are as follows: S ½ of Section 3, N ½ of Section 10, S ½ of Section 9, NW ¼ of Section 16, N ½ and SW ¼ of Section 17, S ½ of Section 18, N ½ Section 19, NW ¼ Section 20 of T37N R5W; and the N ½ and SW ¼ of T37N R6W in Porter County, Indiana. The project area is shown in Appendix A, Figures 1 – 2.

1.2 Existing Land Use

The eastern end of the project area and trail route runs through the Great Marsh wetland complex (from Lake Shore County Road to Kemil Road). An extensive network of roads was developed and abandoned within the marsh over the past 100 years. The east end of the project area largely runs along old roadbeds or within the existing NIPSCO utility corridor. Where the roadbeds run through forested wetland (hydromesophytic swamp forest), the adjacent wetlands are high quality with limited invasive species. The roadbeds within the wetlands are overgrown with a mixture of non-native shrubs. Where the roadbeds run through upland forest, the old roadbeds and adjacent dune forest are dominated by Asian bittersweet and non-native shrubs.

The central portion of the project area, between Highway 12 and Furnessville Road, encompasses dune forest along the Calumet Dunes as well as the interdunal wetland system to the south. Portions of this dune forest community were developed with roads and houses which disturbed the landscape. The areas around the USGS office on Kemil Road and east towards Oakwood Street have extensive areas dominated by invasive shrubs such as burning bush. The portions of dune forest outside of the areas that were formerly residential development, are still high quality with are largely open understory. Many locations of sensitive species have been identified within this portion of the project area.

The west end of the project area is the most disturbed and has the least amount of wetland. This area is found between Hadenfelt Road and State Road 49. This area has been impacted in the past with either residential development or possibly agricultural use. Much of the dune forest in this area is heavily degraded. A tributary of Dunes Creek, Munson Ditch (Stream 3) runs through this area. The creek meanders through a stream valley with diverse species along the floodplain and adjacent seeps. This area though diverse, is also threatened by invasive species (Japanese barberry). Overall, the west end of the project area is the most disturbed.

2.0 Methods

For the purposes of identifying those wetlands regulated under Sections 404 and 401 of the Clean Water Act, a wetland delineation was completed using the routine methodology as outlined in the 1987 U.S. Army Corps of Engineers' Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (U.S. Army Corps of Engineers, 2012).

2.1 Desktop Review

- Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS), excerpts from Soil Survey of Porter County, Indiana (Appendix A, Figure 3)
- NRCS list of hydric soils for Porter County
- U.S. Geological Survey 7.5-minute Topographic Maps: Chesterton, Indiana quadrangle (Appendix A, Figure 1)
- National Wetland Inventory (NWI) Map for the area (Appendix A, Figure 4)

- National Hydrography Dataset (NHD)
- Aerial photography (Google Earth).

These documents provide information on areas where wetlands have been previously identified or that possess a high likelihood of containing wetlands. These areas were then visited to make on-site determinations, and where necessary, complete delineations of the uppermost wetland boundary.

2.2 Field Survey

A preliminary reconnaissance of the Property was used to determine the general topography and plant communities on the Property and to identify suitable locations for sampling transects. Transects were initiated at representative locations within each wetland to complete the wetland determination. Once an upland site was encountered, the uppermost wetland boundary was demarked along the transect. The uppermost wetland boundary was flagged using consecutively numbered surveyor flagging. Subject to weathering, the flagging will remain in the field for use during a USACE / IDEM site visit and/or for a guide during construction.

2.3 Wetland Mapping

The uppermost wetland boundary of each wetland was flagged using consecutively numbered surveyor flagging. The wetland areas and data points were surveyed by SEH Inc, a civil engineering and surveying company, in Munster, Indiana.

2.4 Soils

A 2 ¾ inch hand bucket auger was used to observe soil profiles. Depths of the soil profile described varied across the landscape and were typically written to a depth where positive hydric soil determinations could be completed. Where possible, soil borings were completed to a depth of five feet or until free water was encountered in the boring hole. A ten-foot measuring tape was used to obtain measurements specific to the soil horizons. A Munsell color book was used to quantify soil matrix colors as well as the oxidation and reduction colors described on the attached data sheets. The soil texture analysis was completed in the field. No soil samples were submitted for laboratory analysis. All soil descriptions were completed by an American Registry of Certified Professionals in Agronomy Crops and Soils (ARCPACS) Certified Professional Soil Scientist and a Registered Professional Soil Scientist in the State of Indiana.

2.5 Hydrology

Hydrology data was collected at each soil boring location. Free water was measured at least thirty minutes after the soil borings were completed. The time lag allows for the free water in an unlined bore hole to normalize and reach its peak level at that point in time.

2.6 LiDAR

The Open Topography data set has completed a 3-year program between 2011-2013 to produce a 1.5-meter average post spacing for all 92 counties in Indiana and 1 meter post spacing for all existing county LiDAR. LiDAR maps included in this report show a 1-meter resolution between contours.

3.0 Results

3.1 Mapped Resources

3.1.1 Streams

According to the National Hydrography dataset produced by the U.S. Geological Survey (USGS) (Figures 4.1 - 4.3), two unnamed tributaries of Wieland Ditch and a portion of Munson Ditch are mapped within the project area.

3.1.2 National Wetland Inventory and National Hydrography Dataset

The National Wetland Inventory (NWI) map identifies seventeen wetlands across the project area (Appendix A, Figure 4). See details in Table 1 below.

TABLE 1. NWI WETLANDS MAPPED WITHIN THE PROJECT AREA.

NWI Symbol	Wetland Name	Count
PSS1C	Palustrine, scrub-shrub, broad-leafed deciduous,	2
	seasonally flooded wetland	
PFO1A	Palustrine, forested, broad-leaved deciduous,	6
	temporarily flooded wetland	
PFO1Ah	Palustrine, forested, broad-leaved deciduous,	2
	temporarily flooded, diked/impounded wetland	
PFO1C	Palustrine, forested, broad-leaved deciduous,	3
	seasonally flooded wetland	
R2UBFx	Riverine, lower perennial, unconsolidated bottom,	2
	semipermanently flooded, excavated	
PFO1/SS1C	Palustrine, forested, broad-leaved deciduous/ scrub-	1
	shrub, broad leaved deciduous, seasonally flooded	
	wetland	
PSS1/EM1C	Palustrine, scrub-shrub, broad-leafed deciduous/	1
	emergent, persistent, seasonally flooded wetland	

3.1.3 **Soils**

According to the Soil Survey Geographic (SSURGO) Database for Porter County, Indiana, the project area does contain nationally listed hydric soils (see Table 2 below and Figures 3.1-3.3). The Property lies in the northeast part of Porter County within the Oakville-Maumee-Brems soil association. This soil association is characterized by nearly level to steep, well drained, very poorly drained, and moderately well drained sandy soils on outwash plains, lake plains, beach ridges, and sand dunes.

TABLE 2. SOIL TYPES WITHIN THE PROJECT AREA.

Soil	Soil Type	Hydric Range	Hydric
Symbol			Rating
Ad	Adrian muck, drained	Hydric	100
BtA	Brems sand, 0 to 3 percent slopes	Predominantly Non-Hydric	6
Du	Dune land	Non-Hydric	0
Fh	Fluvaquents	Predominantly Non-Hydric	0
Но	Houghton muck, drained	Hydric	100
Mm	Maumee loamy sand	Hydric	100
Mn	Maumee loamy sand, ponded	Hydric	100
MuuA	Morocco loamy sand	Predominantly Non-Hydric	6
OaE	Oakville fine sand, 18 to 40 percent slopes	Predominantly Non-Hydric	9
OaC	Oakville fine sand, 4 to 12 percent slopes	Predominantly Non-Hydric	9
Pk	Pits	Non-Hydric	0
PIB	Plainfield sand, 2 to 6 percent slopes	Predominantly Non-Hydric	6
ТуА	Tyner loamy sand, 0 to 3 percent slopes	Predominantly Non-Hydric	6

3.1.4 LiDAR

LiDAR data as 1-meter contours was derived from the OpenTopography Indiana Statewide Imagery and LiDAR Program. One foot contour data shows that most of the highest elevations along the project limits are south of Highway 12 at the top of dune ridges typically around 640 feet in elevation. The lowest elevations were generally found within the wetlands marked on site around 605 to 610 feet in elevation.

3.1.5 Antecedent Precipitation

Field work was performed between April and June 2022. Antecedent precipitation records shown are derived from the Antecedent Precipitation Tool Version 1.0 from USACE. The three months preceding the field work in April 2022 were considered "wetter" than normal while the months preceding field work in May and June 2022 were considered "normal" periods of precipitation. Precipitation was derived using combined data from the Indiana Dunes, Porter, Portage, Kouts, Chesterton, and Valparaiso weather stations (Appendix E).

3.2 Field Survey

Field work was conducted April 8 and 15; May 2, 4, 13, 24, and 27; and June 9, 17, and 23; 2022 to evaluate the presence of wetlands and the limits of hydric soil and wetland hydrology within the Project Area. The delineated wetlands are shown in the survey in Appendix B with data point locations shown in Figure 5.0 – 5.18. Photos of each wetland are in Appendix D.

3.2.1 Streams and Ditches

The project area includes a roadside ditch, two unnamed blueline stream sections of Wieland Ditch and Munson Ditch, a tributary of Dunes Creek.

3.2.1.2 Stream 1

Stream 1 is a 220-linear foot roadside ditch along the east side of Lake Shore County Road. This ditch is bisected by a culvert for the existing Calumet Trail. The ditch drains north into the Great Marsh wetland system.

3.2.1.3 Stream 2

Stream 2 is a 177-linear foot portion of Wieland Ditch. This ditch drains north to Kintzele Ditch which drains directly to Lake Michigan. Data point P69 is in the unvegetated, flowing creek bed. Soils at this data point were sandy with a matrix color of 10YR 5/2 with 10YR 5/6 colored concentrations in the upper 9 inches and a matrix color of 10YR 5/1 from 9-20 inches.

3.2.1.3 Stream 3

Stream 3 is a 1,128-linear foot section of Munson Ditch, west of Hadenfelt Road. It is a mapped blue-line stream that drains to Dunes Creek to the northwest. Data point 91 was taken within a portion of the stream channel that was not flowing. Flow was present in adjacent areas of the stream at the time of delineation. Soils were sandy in texture with a matrix color of 10YR 6/2 in the upper 15 inches.

3.2.1.4 Stream 4

Stream 4 is a 537-linear foot stream that flows north through a sandy drainageway, through a culvert under Highway 12 and drains north to Dunes Creek within the Indiana Dunes State Park. This section of stream channel is not mapped as a blue line stream but flows along and through Wetland 29.

TABLE 3. STREAM FEATURES IDENTIFIED ON SITE.

Feature Name	Name	Linear Feet
Stream 1	Unnamed roadside ditch	220
Stream 2	Wieland Ditch	177
Stream 3	Munson Ditch	1,128
Stream 4	Unnamed tributary of Dunes Creek	537

3.2.2 Wetlands

The on-site wetland delineation identified 32.41 acres of forested wetlands and 8.89 acres of emergent

wetlands. USACE wetland determination data forms were completed for points within the wetland and upland areas and are attached to this report as Appendix C. Written descriptions of the wetlands, wetland boundaries, and the adjacent uplands follow.

3.2.2.1 Wetland 1

Wetland 1 is a 21.25-acre forested wetland to the west of Lake Shore County Road. This wetland is mapped in the NWI as palustrine, forested, broad-leaved deciduous, temporary flooded wetland (PFO1A) wetland complex. Dominant plant species observed at the data points within the wetland included silver maple (*Acer saccharinum*, FACW), black gum (*Nyssa sylvatica*, FAC), American elm (*Ulmus americana*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), black alder (*Alnus glutinosa*, FACW), common winterberry (*Ilex verticillata*, FACW), spicebush (*Lindera benzoin*, FACW), grey dogwood (*Cornus racemosa*, FAC), red-osier dogwood (*Cornus sericea*, FACW), Guelder-rose (*Viburnum opulus*, FACW), cinnamon fern (*Osmundastrum cinnamomeum*, FACW), lizard tail (*Saururus cernuus*, OBL), skunk cabbage (*Symplocarpus foetidus*, OBL), rice-cut grass (*Leersia oryzoides*, OBL), purple loosestrife (*Lythrum salicaria*, OBL), reed canary grass (*Phalaris arundinacea*, FACW), Canada goldenrod (*Solidago canadensis*, FACU), Alpine cudweed (*Omalotheca supina*, UPL), and riverbank grape (*Vitis riparia*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 1 are mapped as Maumee loamy fine sand, ponded (Mn). The Maumee series consists of nearly level, deep, very poorly drained soil on outwash plains and lake plains that is frequently ponded by surface runoff from adjacent higher lying areas. The Maumee series is listed as hydric soil in both the National Hydric Soil List and the Porter County Hydric Soil List.

Data point P44 was taken within the wetland on the north side of the Calumet trail in a sensitive fern and purple loosestrife dominated area. Soils were mucky to loamy clay in texture with a matrix color of 10YR 3/1 in the upper 12 inches with 10YR 5/6 colored concentrations from 4-12 inches. These soils were hydric based on indicators F1, loamy mucky mineral and F6, redox dark surface. Data point P48 was taken south of the Calumet trail in a sedge dominated part of the wetland. Soils were mucky to sandy in texture with a matrix color of 10YR 2/1 in the upper 12 inches and a matrix color of 10YR 5/4 from 12-28 inches. These souls were hydric based on indicators A2, histic epipedon and A3, black histic. Data point P50 was taken west of an old roadbed in the proposed trail route to the east of the Beverly Shores train station. Soils were mucky to sandy in texture with a matrix color of 10YR 2/1 in the upper 4 inches and a matrix color of 10YR 5/2 from 4-12 inches. These soils are hydric based on indicators A4, hydrogen sulfide and S1, sandy mucky mineral. Data point P52 was taken within Wetland 1 northwest of Jordan Ave. Soils were mucky to sandy in texture with a matrix color of 10YR 2/1 in the upper 12 inches with 10YR 6/8 from 2-12 inches and a matrix color of 10YR 4/3 from 12-20 inches. Data point P53 was taken in an area that would require construction of a boardwalk for trail access to the northwest of Service Drive, these soils had a similar profile to data point P52. These soils were hydric based on indicators S1, sandy mucky mineral and S5, sandy redox. Soils at data point P54 were taken north of the Calumet Trail, they were mucky to loamy clay in texture with a matrix color of 10YR 3/1 in the upper 14 inches with 10YR 4/6 concentrations from 6-14 inches. These soils were hydric based on indicators F1,

loamy mucky mineral and F6, redox dark surface. Data point P57 was taken from a spicebush and reed canary grass dominated wetland to the northwest of the Beverly Shores train station. Soils were mucky to sandy in texture with a matrix color of 10YR 2/1 with 10YR 4/6 colored concentrations in the upper 6 inches and a matrix color of 10YR 3/1 with 10YR 2/1 colored depletions and 10YR 5/6 colored concentrations from 6-13 inches. These soils were hydric based on indicators S1 sandy mucky mineral and S5 sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: surface water (A1), high water table (A2), saturation (A3), algal mat or crust (B4), oxidized rhizospheres on living roots (C3); and secondary indicators: geomorphic position (D2), FAC-neutral test (D5). Saturation and high-water table were observed at all data points at a depth between 4 and 8 inches from the surface. Surface water was present at data point P50.

3.2.2.2 Wetland 2

Wetland 2 is a 8.23-acre emergent wetland east of Broadway Avenue on the south side of the Calumet Trail. This wetland is not mapped in the NWI. The dominant plant species within Wetland 2 included reed canary grass (*Phalaris arundinacea*, FACW) and Canada goldenrod (*Solidago canadensis*, FACU) as recorded on USACE data forms in Appendix C.

The soils within Wetland 2 are mapped as Maumee loamy sand, ponded (Mn). The Maumee series was described above in Section 3.2.1.1 Wetland 1. Data point P46 was taken south of the Calumet trail in a sedge dominated part of the wetland. Soils were mucky to sandy in texture with a matrix color of 10YR 3/1 in the upper 10 inches with 10YR 5/6 colored concentrations from 4-10 inches and a matrix color of 10YR 4/1 from 10-18 inches. These soils were hydric based on indicators A11, depleted below dark surface; F1, loamy mucky mineral; F3, depleted matrix; and F6, redox dark surface. Soils at data point P56 within Wetland 2 were mucky loam to clayey in texture with a matrix color of 10YR 3/1 in the upper 8 inches with 10YR 4/6 colored concentrations from 2-8 inches and a matrix color of 10YR 4/1 with 10YR 4/6 colored concentrations from 8-16 inches. These soils were hydric based on indicators A11, depleted below dark surface; F3, depleted matrix; and F6, redox dark surface.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3), and oxidized rhizospheres on living roots (C3); and secondary indicators: geomorphic position (D2) and FAC-neutral test (D5). A water table was observed at a depth of 4 inches from the soil surface with saturation beginning at 2 inches.

3.2.2.3 Wetland 3

Wetland 3 is a 0.46-acre depressional emergent wetland west of Broadway Street on the south side of the Calumet Trail. This wetland is not mapped in the NWI. The dominant plant species within Wetland 3 included purple loosestrife (*Lythrum salicaria*, OBL), green ash (*Fraxinus pennsylvanica*, FACW), and blunt spikerush (*Eleocharis obtusa*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 3 are mapped as Maumee loamy sand, ponded (Mn). The Maumee series was described above in Section 3.2.1.1 Wetland 1. Soils at data point P61 within Wetland 3 were mucky sand to sandy in texture with a matrix color of 10YR 2/2 in the upper 12 inches with 10YR 4/6 colored concentrations in the upper 5 inches and 10YR 5/6 colored concentrations from 5-12 inches. The third horizon had a matrix color of 10YR 6/2 with 10YR 5/2 depletions and 10YR 5/8 concentrations from 12-18 inches. These soils were hydric based on indicators S1, sandy mucky mineral and S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: oxidized rhizospheres on living roots (C3); and secondary indicators: geomorphic position (D2) and FAC-neutral test (D5). Wetland 3 has a seasonally saturated/inundated hydroperiod.

3.2.2.4 Wetland 4

Wetland 4 is a 15.45-acre forested wetland on the west side of Broadway north of the existing Calumet Trail. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, temporary flooded wetland (PFO1A) wetland. The dominant plant species observed within Wetland 4 included silver maple (*Acer saccharinum*, FACW), American hornbeam (*Carpinus caroliniana*, FAC), swamp white oak (*Quercus bicolor*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), spicebush (*Lindera benzoin*, FACW), purple loosestrife (*Lythrum salicaria*, OBL), spotted touch-me-not (*Impatiens capensis*, FACW), royal fern (*Osmunda spectibilis*, OBL), cattail (*Typha x glauca*, OBL), skunk cabbage (*Symplocarpus foetidus*, OBL), horsetail (*Equisetum arvense*, FAC), and fowl-mana grass (*Glyceria striata*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 3 are mapped as Maumee loamy sand, ponded (Mn). The Maumee series was described above in section 3.2.1.1 Wetland 1. Data point P59 within Wetland 3 were mucky to sandy in texture with a matrix color of 10YR 2/2 with 10YR 5/8 colored concentrations in the upper 6 inches a gleied horizon was observed from a depth of 6-9 inches. These soils were hydric based on indicators S1, sandy mucky mineral and S5, sandy redox. Data point P62 was taken on the south side of an old roadbed in a region dominated by reed canary grass, royal fern, and silver maple. Soils at this data point were muck to sandy in texture with a matrix color of 10YR 2/2 with 10YR 4/6 and 10YR 5/8 colored concentrations in the upper 14 inches. These soils were hydric based on indicators F1, loamy mucky mineral and F6, redox dark surface. Data point P64 was taken north of the old roadbed in a forested wetland dominated by swamp white oak and skunk cabbage. The soils at this data point were mucky to sandy in texture with a gleied matrix color of N 2.5/ in the upper 6 inches and a matrix color of 10YR 2/2 with 10YR 4/6 colored concentrations from 6-12 inches. These soils were hydric based on indicators S1, sandy mucky mineral and S5, sandy redox. Soils at data point P65 were mucky to sandy in texture with a matrix color of 10YR 2/2 with 10YR 4/6 colored concentrations in the upper 14 inches, and a matrix color of 10YR 5/2 with 10YR 6/2 depletions and 10YR 5/8 colored concentrations from 14-20 inches. These soils were hydric based on indicators F1, loamy mucky mineral and F6, redox dark surface. Data point P67 was within the forested section of Wetland 4 in an area dominated by lizard tail on the south side of the old east/west roadbed. Soils were mucky loam to sandy in texture with a matrix color of 10YR 2/1 with 10YR 4/6 colored concentrations in the upper 8 inches and a matrix color of 10YR 5/3 with 10YR

5/2 and 10YR 6/3 colored depletions and 10YR 6/8 colored concentrations from 8-18 inches. These soils were hydric based on indicators loamy mucky mineral (F1) and redox dark surface (F6).

Three primary indicators of hydrology were observed at the time of the delineation: high water table (A2), saturation (A3), oxidized rhizospheres on living roots (C3) and secondary indicators: geomorphic position (D2) and FAC-neutral test (D5). A water table was observed within this wetland beginning at a depth between 6 and 10 inches from the soil surface.

3.2.2.5 Wetland 5

Wetland 5 is a 12.40-acre forested wetland on the west side of Wieland Ditch to the north of the old east/west roadbed. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within Wetland 9 included silver maple (*Acer saccharinum*, FACW), green ash (*Fraxinus pennsylvanica*, FAC), spicebush (*Lindera benzoin*, FACW), spotted touch-me-not (*Impatiens capensis*, FACW), and Virginia jumpseed (*Persicaria virginiana*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 5 are mapped as Maumee loamy sand, ponded (Mn). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Data point P73 was taken on the north side of the same roadbed. Soils were mucky loam to sandy in texture with a matrix color of 10YR 2/2 with 10YR 4/6 colored concentrations in the upper 8 inches and a matrix color of 10YR 2/2 with 10YR 3/1 colored depletions and 10YR 5/8 and 10YR 4/6 colored concentrations from 8-14 inches. These soils were hydric based on indicators F1, loamy mucky mineral and F6, redox dark surface.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicator: oxidized rhizospheres on living roots (C3) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.6 Wetland 6

Wetland 6 is a 0.64-acre forested depressional wetland, west of Wieland Ditch on the south side of the old east/west roadbed. This small fern dominated depression is isolated from the larger forested wetland complex to the east. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, temporary flooded wetland (PFO1A) wetland. The dominant plant species observed within Wetland 7 included silver maple (*Acer saccharinum*, FACW), northern spicebush (*Lindera benzoin*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), and royal fern (*Osmunda spectabilis*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 6 are mapped as Maumee sand, ponded (Mn). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Soils at data point P70 within Wetland 6 were mucky to sandy in texture with a matrix color of 10YR 3/2 with 10YR 4/6 colored concentrations in the upper 8 inches and a matrix color of 10YR 5/4 with 10YR 5/2 colored depletions and 10YR 6/8 colored

concentrations from 8-16 inches. The third horizon had a matrix color of 10YR 5/3 with 10YR 6/3 and 10YR 6/2 colored depletions and 10YR 5/8 colored concentrations from 16-25 inches. These soils were hydric based on indicators F1, loamy mucky mineral and F6, redox dark surface.

Hydrology indicators observed within Wetland 6 at the time of the delineation included primary indicator: water-stained leaves (B9) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.7 Wetland 7

Wetland 7 is a 11.17-acre forested wetland on the south side of the old east/west roadbed to the west of Wieland Ditch. It is separated from Wetland 6 by a narrow upland ridge. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded (PFO1C) wetland. The dominant plant species observed within Wetland 8 included silver maple (*Acer saccharinum*, FACW), swamp white oak (*Quercus bicolor*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), northern spicebush (*Lindera benzoin*, FACW), lizard tail (*Saururus cernuus*, OBL), and false hop sedge (*Carex lupuliformis*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 7 are mapped as Maumee loamy sand, ponded (Mn) and Maumee loamy sand (Mm). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Data point P71 was taken in a sparsely vegetated depression south of an old roadbed. Soils were mucky loamy to mucky sand in texture with a matrix color of 10YR 3/2 in the upper 8 inches and a matrix color of 10YR 3/1 with 10YR 5/1 colored depletions and 10YR 4/6 colored concentrations from 8-15 inches. The third horizon had a matrix color of 10YR 6/3 with 10YR 6/2 colored depletions and 10YR 6/8 colored concentrations from 15-20 inches. These soils were hydric based on indicator F1, loamy mucky mineral. Data point P74 was taken at the bend of the old roadbed just as it turns south in a mucky forested wetland with a lizard tail dominated understory. Soils were muck to sandy in texture with a gleied matrix color of N 2.5/ with 10YR 4/6 colored concentrations in the upper 10 inches and a matrix color of 10YR 2/1 with 10YR 4/6 colored concentrations from 10-17 inches. These soils were hydric based on indicators A2, histic epipedon and A12, thick dark surface. Data point P76 was taken southwest of P74 in a sedge and lizard tail dominated section of the wetland. Soils were mucky loam to sandy in texture with a matrix color of 10YR 2/2 with 10YR 4/6 colored concentrations in the upper 9 inches and a matrix color of 10YR 5/2 with 10YR 6/2 colored depletions and 10YR 5/6 and 10YR 6/8 colored concentrations from 9-20 inches.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: sparsely vegetated concave surface (B8), water-stained leaves (B9), high water table (A2), saturation (A3), water marks (B1), algal mat or crust (B4), oxidized rhizospheres on living roots (C3), and secondary indicators: geomorphic position (D2), moss trim lines (B16), and FAC-Neutral test (D5). A water table was observed at a depth of 2 inches from the soil surface with saturation present throughout the profile.

3.2.2.8 Wetland 8

Wetland 8 is a 6.23-acre forested wetland on the north side of the old roadbed in a fern dominated wetland. This wetland is separated from Wetland 5 to the east by an old north/south roadbed. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within Wetland 10 included silver maple (*Acer saccharinum*, FACW), northern spicebush (*Lindera benzoin*, FACW), sassafras (*Sassafras albidum*, FACU), and New York fern (*Parathelypteris noveboracensis*, FAC) recorded on USACE data forms in Appendix C.

The soils within Wetland 8 are mapped as Maumee loamy sand (Mn). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Data point P78 was taken on the northwest corner where the old roadbeds intersect in a forested wetland dominated by silver maple and New York fern. Soils were muck to sandy in texture with a matrix color of 5YR 4/6 in the upper 6 inches and a matrix color of 10YR 2/2 with 10YR 5/6 colored concentrations from 6-12 inches. These soils were hydric based on indicators S1, sandy mucky mineral and S5 sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicator: oxidized rhizospheres on living roots (C3) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.9 Wetland 9

Wetland 9 is a 4.07-acre forested/emergent wetland north of the Calumet Trail just east of State Park Road. This wetland is not mapped in the NWI. The dominant plant species observed within Wetland 12 included common reed (*Phragmites australis,* FACW) and common horsetail (*Equisetum arvense,* FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 9 are mapped as Maumee loamy sand (Mn). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Soils at data point P79 were muck to sandy in texture with a gleied matrix color of N 2.5/ with 10YR 4/6 colored concentrations in the upper 10 inches and a matrix color of 10YR 2/1 with 10YR 4/6 and 10YR 5/8 colored concentrations from 10-17 inches. These soils were hydric based on indicators A2, histic epipedon and A12, thick dark surface.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3), and oxidized rhizospheres on living roots (C3), and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 10 inches from the soil surface with saturation beginning at 8 inches.

3.2.2.10 Wetland 10

Wetland 10 is a 1.84-acre depressional emergent wetland south of the Calumet Trail just east of State Park Road. This wetland is not mapped in the NWI. The dominant plant species observed within Wetland 10 included cattail (*Typha x glauca*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 10 are mapped as Maumee loamy sand, ponded (Mn) and Maumee loamy sand (Mm). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Soils at data point P81 were muck to sandy in texture with a gleied matrix color of N 2.5/ in the upper 6 inches and a matrix color of 7.5YR 5/4 from 6-18 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high-water table (A2) and saturation (A3) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 10 inches from the soil surface with saturation beginning at 6 inches.

3.2.2.11 Wetland 11

Wetland 11 is a 0.06-acre forested interdunal wetland dominated by maple and black gum, south of Wetland 12. This wetland is not mapped in the NWI. The dominant plant species observed within Wetland 14 included red maple (*Acer rubrum*, FAC), black gum (*Nyssa sylvatica*, FAC), royal fern (*Osmunda spectibilis*, OBL), and green ash (*Fraxinus pennsylvanica*, FACW) as recorded on USACE data forms in Appendix C.

The soils within Wetland 11 are mapped as Maumee loamy sand (Mm). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Soils at data point P35 were mucky sand to sandy in texture with a matrix color of 10YR 2/1 in the upper 10 inches and a matrix color of 10YR 4/3 from 10-16 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3), sparsely vegetated concave surface (B8) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 10 inches from the soil surface with saturation beginning at 6 inches.

3.2.2.12 Wetland 12

Wetland 12 is a 0.01-acre depressional, emergent wetland along the forest edge on the south side of Highway 12 west of the USGS building. This wetland is not mapped in the NWI. The dominant plant species observed within the wetland included royal fern (*Osmunda spectibilis*, OBL) and soft rush (*Juncus effusus*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 12 are mapped as Maumee loamy sand (Mm). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Soils at data point P33 were sandy in texture with a matrix color of 10YR 2/1 in the upper 6 inches and a matrix color of 10YR 4/1 with 10YR 4/6 colored concentrations from 6-20 inches. These soils were hydric based on indicator S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (2), saturation (A3) sparsely vegetated concave surface (B8) and secondary indicators: geomorphic position (D2), microtopographic relief (D4), and FAC-Neutral test (D5). A water

table was observed at a depth of 11 inches from the soil surface with saturation beginning at 6 inches.

3.2.2.13 Wetland 13

Wetland 13 is a 0.23-acre forested wetland, south of Highway 12 to the west of Wetlands 11 and 12. This wetland is not mapped in the NWI. The dominant plant species observed within the wetland included red maple (*Acer rubrum*, FAC), black gum (*Nyssa sylvatica*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), northern spicebush (*Lindera benzoin*, FACW), royal fern (*Osmunda spectibilis*, OBL), and fringed sedge (*Carex crinita*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 13 are mapped as Maumee loamy sand (Mm). The Maumee series was described above in Section 3.2.2.1 Wetland 1. Soils at data point P37 were sandy in texture with a matrix color of 10YR 4/1 with 10YR 4/6 colored concentrations in the upper 10 inches and a matrix color of 10YR 5/4 with 10YR 5/8 colored concentrations from 10-18 inches. These soils were hydric based on indicator S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth 10 inches from the soil surface with saturation beginning at 6 inches.

3.2.2.14 Wetland 14

Wetland 14 is a 1.61-acre forested interdunal wetland on the northeast side of Teale Drive, an abandoned road. This wetland is mapped in the NWI as a riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded, excavated wetland (R5UBFx) and a palustrine, forested, broadleaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included pin oak (*Quercus palustris*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), buttonbush (*Cephalanthus occidentalis*, OBL), common hop sedge (*Carex lupulina*, OBL), shallow sedge (*Carex lurida*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 14 are mapped as Brems sand (BtA), Oakville fine sand (OaC/OaE), and Maumee loamy sand, ponded (Mn). The Brems soil association is characterized by nearly level, gently sloping, deep, moderately well drained soils on acid, outwash sands. The Oakville series consists of strongly sloping and moderately steep, deep, well-drained soil on lake plains, low sand dunes, and beach ridges. The Maumee series was described above in section 3.2.2.1 Wetland 1. Data point P31 was taken on the east side of the culvert. Parts of this side of the wetland were dominated by common reed. Soils at this data point were sandy in texture with a matrix color of 10YR 2/2 with 10YR 4/4 colored concentrations from 0-20 inches. These soils were hydric based on indicator S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3), inundation visible on aerial imagery (B7) and

secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at the soil surface, though no surface water was present. The profile was saturated throughout.

3.2.2.15 Wetland 15

Wetland 15 is a 1.11-acre forested interdunal wetland on the northwest side of Teale Drive. This wetland is connected to Wetland 14 to the east via a culvert that runs under the old roadbed. This wetland is mapped in the NWI as a riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded, excavated wetland (R5UBFx) and a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within Wetland 16 included pin oak (*Quercus palustris*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), eastern cottonwood (*Populus deltoides*, FAC), buttonbush (*Cephalanthus occidentalis*, OBL), (*Carex grayi*, FACW), pointed broom sedge (*Carex scoparia*, FACW), earth loosestrife (*Lysimachia terrestris*, OBL), and water parsnip (*Sium suave*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 15 are mapped as Brems sand (BtA) and Oakville fine sand (OaC/OaE). The Brems and Oakville series were described 3.2.2.14 Wetland 14. Soils at data point P29 taken on the west side of the culvert were mucky sand to sandy in texture with a matrix color of 10YR 2/2 in the upper 4 inches, a matrix color of 10YR 3/2 from 4-10 inches and a matrix color of 10YR 5/2 from 10-16 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: inundation visible on aerial imagery (B7) and water-stained leaves (B9) and secondary indicators: geomorphic position (D2) and FAC-neutral test (D5).

3.2.2.16 Wetland 16

Wetland 16 is a 0.16-acre forested depressional wetland with a holly dominated understory on the west side of Teale Drive to the south of Wetland 15. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included black gum (*Nyssa sylvatica*, FAC), sugar maple (*Acer saccharum*, FACU), green ash (*Fraxinus pennsylvanica*, FACW), and sensitive fern (*Onoclea sensibilis*, FACW) as recorded on USACE data forms in Appendix C.

The soils within Wetland 16 are mapped as Brems sand (BtA) and Oakville fine sand (OaC). The Brems and Oakville series were described above in section 3.2.2.14 Wetland 14. Soils at data point P27 within Wetland 16 were sandy in texture with a matrix color of 10YR 2/1 in the upper 6 inches and a matrix color of 10YR 2/2 with 10YR 4/3 colored concentrations from 6-20 inches. These soils were hydric based on indicator S7, dark surface.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicator: B9 water-stained leaves and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.17 Wetland 17

Wetland 17 is a 1.18-acre forested wetland on the northwest corner of Teale Drive and Furnessville Road. Large areas of the wetland were inundated at the time of delineation. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within Wetland 20 included silver maple (*Acer saccharinum*, FACW), red maple (*Acer rubrum*, FAC), pin oak (*Quercus palustris*, FACW), Eastern cottonwood (*Populus tremuloides*, FAC), grey dogwood (*Cornus racemosa*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), spicebush (*Lindera benzoin*, FACW), multiflora rose (*Rosa multiflora*, FACU), burning bush (*Euonymus alatus*, UPL), sensitive fern (*Onoclea sensibilis*, FACW), royal fern (*Osmunda spectibilis*, OBL), wood anemone (*Anemone quinquefolia*, FACU), and riverbank grape (*Vitis riparia*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 17 are mapped as Maumee loamy sand, ponded (Mn), Brems sand (BtA), and Oakville fine sand (OaC). The Maumee series was described above in Section 3.2.2.1 Wetland 1. The Brems and Oakville series were described above in section 3.2.2.14 Wetland 14. Data point P1 was taken north of Furnessville Road in a part of the wetland dominated by silver maple and sensitive fern. Soils at this data point were sandy in texture with a matrix color of 10YR 2/1 in the upper 12 inches and a matrix color of 10YR 5/1 from 12-20 inches. These soils were hydric based on indicator A11, depleted below dark surface and A12, thick dark surface. Data point P24 was taken west of Teale drive in a pin oak and maple dominated forest with a royal fern understory. Soils at this data point were sandy in texture with a matrix color of 10YR 2/1 in the upper 14 inches with 10YR 4/6 colored concentrations from 6-14 inches and a matrix color of 10YR 4/6 with 10YR 4/3 colored depletions from 14-20 inches. These soils were hydric based on indicator S5, sandy redox. Data point P26 was taken from within the wetland on the west side of Teale drive in a region that showed signs of recent inundation. Soils were mucky sand to sandy in texture with a matrix color of 10YR 2/1 in the upper 14 inches with 10YR 4/4 colored concentrations from 4-14 inches and a matrix color of 10YR 6/1 with 10YR 3/2 colored depletions from 14-20 inches. These soils were hydric based on indicators S1, sandy mucky mineral and S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3), water marks (B1), and water-stained leaves (B9) and secondary indicators: moss trim lines (B16), geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 4-8 inches from the soil surface with saturation beginning between 2-4 inches.

3.2.2.18 Wetland 18

Wetland 18 is a 0.42-acre forested wetland in the northeast corner of Teale Drive and Furnessville Road. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included silver maple (*Acer saccharinum*, FACW), sugar maple (*Acer saccharum*, FACU), poison ivy (*Toxicodendron radicans*, FAC), fowl mannagrass (*Glyceria striata*, OBL), and Virginia creeper (*Parthenocissus quinquefolia*, FACU) as

recorded on USACE data forms in Appendix C.

The soils within Wetland 18 are mapped as Maumee loamy sand, ponded (Mn) and Oakville fine sand (OaC). The Maumee series was described above in Section 3.2.2.1 Wetland 1. The Oakville series was described above in section 3.2.2.14 Wetland 14. Soils at data point P22 within Wetland 18 were sandy in texture with a matrix color of 10YR 2/1 with 10YR 5/8 colored concentrations in the upper 12 inches and a matrix color of 10YR 6/1 from 12-16 inches. These soils were hydric based on indicator S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2) and saturation (A3) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 6 inches from the soil surface with saturation beginning at 4 inches.

3.2.2.19 Wetland 19

Wetland 19 is a 0.11-acre forested, depressional wetland on the south side of Furnessville Road just south of Teale Drive. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included American elm (*Ulmus americana*, FACW), swamp white oak (*Quercus bicolor*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), spicebush (*Lindera benzoin*, FACW), and spotted touch-menot (*Impatiens capensis*, FACW) as recorded on USACE data forms in Appendix C.

The soils within Wetland 19 are mapped as Oakville fine sand (OaC). The Oakville series was described above in Section 3.2.2.14 Wetland 14. Soils at data point P20 were mucky sand to sandy in texture with a matrix color of 10YR 2/1 in the upper 4 inches and a matrix color of 10YR 3/2 with 10YR 3/3 colored depletions from 4-16 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2) and saturation (A3) and secondary indicator: geomorphic position (D2). A water table was observed at a depth of 4 inches from the soil surface with saturation beginning at the surface. The central portion of this wetland was inundated at the time of delineation.

3.2.2.20 Wetland 20

Wetland 20 is a 0.68-acre forested wetland on the south side of Furnessville Road. The wetland was fully inundated at the time of delineation, so soils were not observed. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included pin oak (*Quercus palustris*, FACW), black willow (*Salix nigra*, OBL), peachleaf willow (*Salix amygdaloides*, FACW), buttonbush (*Cephalanthus occidentalis*, OBL), swamp rose (*Rosa palustris*, OBL), and Walter's sedge (*Carex striata*, OBL) as recorded on USACE data forms in Appendix C.

The soils within Wetland 20 are mapped as Maumee loamy sand, ponded (Mn), Brems sand (BtA), and Oakville fine sand (OaC). The Maumee series was described above in Section 3.2.2.1 Wetland 1. The Brems and Oakville series were described above in section 3.2.2.14 Wetland 14. Soils at data point P18 were inundated at the time of delineation.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: surface water (A1), high water table (A2), saturation (A3) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.21 Wetland 21

Wetland 21 is a 0.07-acre forested wetland on the north side of Furnessville Road adjacent to the Glenwood Dunes Trail. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included bitternut hickory (*Carya cordiformis*, FAC), red maple (*Acer rubrum*, FAC) pin oak (*Quercus palustris*, FACW), northern spicebush (*Lindera benzoin*, FACW), grey dogwood (*Cornus racemosa*, FAC), multiflora rosa (*Rosa multiflora*, FACU), sensitive fern (*Onoclea sensibilis*, FACW), enchanters nightshade (*Circaea canadensis*, FACU), Michigan lily (*Lilium michiganense*, FACW), and Virginia creeper (*Parthenocissus quinquefolia*, FACU) as recorded on USACE data forms in Appendix C.

The soils within Wetland 21 are mapped as Maumee loamy sand, ponded (Mn) and Brems sand (BtA). The Maumee series was described above in Section 3.2.2.1 Wetland 1. The Brems series was described above in section 3.2.2.14 Wetland 14. Soils at data point P3 were mucky sand to sandy in texture with a matrix color of 10YR 2/1 in the upper 20 inches with 10YR 4/4 colored concentrations from 14-20 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3) and secondary indicator: FAC-Neutral test (D5). A water table was observed at a depth of 8 inches from the soil surface with saturation beginning at 2 inches.

3.2.2.22 Wetland 22

Wetland 22 is a 0.68-acre forested wetland on the southeast corner of Furnessville Road and Veden Road, to the west of Wetland 21 and 22. This wetland is mapped in the NWI as a palustrine, forested, broad-leaved deciduous, seasonally flooded wetland (PFO1C). The dominant plant species observed within the wetland included American elm (*Ulmus americana*, FACW), black gum (*Nyssa sylvatica*, FAC), red maple (*Acer rubrum*, FAC), grey dogwood (*Cornus racemosa*, FAC), spicebush (*Lindera benzoin*, FACW), poison ivy (*Toxicodendron radicans*, FAC), oriental bittersweet (*Celastrus orbiculatus*, FACU), lance-leaved aster (*Symphyotrichum lanceolatum*, FACW), Michigan lily (*Lilium michiganense*, FACW), Canada mayflower (*Mainanthemum canadense*, FACU) and riverbank grape (*Vitis riparia*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 22 are mapped as Maumee loamy sand, ponded (Mn) and Brems sand (BtA). The Maumee series was described above in Section 3.2.2.1 Wetland 1. The Brems series was described above in section 3.2.2.14 Wetland 14. Soils at data point P16 were mucky sand to sandy in texture with a matrix color of 10YR 2/1 in the upper 14 inches with 10YR 5/2 colored depletions from 4-14 inches. These soils were hydric based on indicator S1, sandy mucky mineral and S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included: high water table (A2), saturation (A3) and water marks (B1) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 2 inches from the soil surface with saturation at the surface.

3.2.2.23 Wetland 23

Wetland 23 0.08-acre forested/emergent, interdunal depression on the southwest corner of Veden Road and Furnessville Road. This wetland is not mapped in the NWI. The dominant plant species observed within the wetland included green ash (*Fraxinus pennsylvanica*, FACW), black willow (*Salix nigra*, OBL), grey dogwood (*Cornus racemosa*, FAC), black raspberry (*Rubus occidentalis*, UPL), spotted joe-pye-weed (*Eutrochium maculatum*, OBL), lake sedge (*Carex lacustris*, OBL), bluejoint grass (*Calamagrostis canadensis*, OBL), reed canary grass (*Phalaris arundinacea*, FACW), riverbank grape (*Vitis riparia*, FAC), and oriental bittersweet (*Celastrus orbiculatus*, FACU) as recorded on USACE data forms in Appendix C.

The soils within Wetland 23 are mapped as Oakville fine sand (OaC). The Oakville series was described above in Section 3.2.2.14 Wetland 14. Soils at data point P14 within Wetland 23 were sandy in texture with a matrix color of 10YR 3/1 in the upper 6 inches and a matrix color of 10YR 4/2 with 10YR 6/6 colored concentrations from 6-10 inches. The third horizon had a matrix color of 10YR 5/6 from 10-16 inches. These soils were hydric based on indicator S5, Sandy Redox.

Hydrology indicators observed within the wetland at the time of the delineation included secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.24 Wetland 24

Wetland 24 is a 0.30-acre forested wetland swale on the north side of Furnessville Road that continues north outside of the project area. This wetland is not mapped in the NWI. The dominant plant species observed within the wetland included silver maple (*Acer saccharinum*, FACW), black gum (*Nyssa sylvatica*, FAC), eastern cottonwood (*Populus tremuloides*, FAC), sassafras (*Sassafras albidum*, FACU), bitternut hickory (*Carya cordiformis*, FAC), grey dogwood (*Cornus racemosa*, FAC), side-flowering aster (*Symphyotrichum lateriflorum*, FAC), tall goldenrod (*Solidago gigantea*, FACW), Virginia creeper (*Parthenocissus quinquefolia*, FACU), and poison ivy (*Toxicodenron radicans*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 24 are mapped as Brems sand (BtA) and Oakville fine sand (OaC). The Brems and Oakville series were described above in Section 3.2.2.14 Wetland 14. Data points P5 and P6 were mucky sand to sandy in texture with a matrix color of 10YR 2/1 in the upper 6-8 inches and a matrix color of 10YR 4/2 from 6-14 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2) saturation (A3) and secondary indicator: FAC-Neutral test (D5).

3.2.2.25 Wetland 25

Wetland 25 is a 0.03-acre forested wetland with a sparsely vegetated understory on the north side of Furnessville Road. This wetland is mapped not in the NWI. The dominant plant species observed within the wetland included silver maple (*Acer saccharinum*, FACW), pin oak (*Quercus palustris*, FACW), black gum (*Nyssa sylvatica*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), meadowsweet (*Spiraea tomentosa*, FACW), and Virginia creeper (*Parthenocissus quinquefolia*, FACU) as recorded on USACE data forms in Appendix C.

The soils within Wetland 25 are mapped as Brems sand (BtA) and Oakville fine sand (OaC). The Brems and Oakville series were described above in Section 3.2.2.14 Wetland 14. Soils at data point P8 were muck in texture with a matrix color of 10YR 3/1 in the upper 2 inches and a matrix color of 10YR 4/2 with 10YR 4/4 colored concentrations from 2-12 inches. The third horizon had a matrix color of 10YR 5/4 from 12-20 inches. These soils were hydric based on indicator S5, sandy redox.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicator: sparsely vegetated concave surface (B8) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.26 Wetland 26

Wetland 26 is a 0.22-acre forested, interdunal depression on the south side of Furnessville Road, west of Wetland 23. This wetland is not mapped in the NWI. The dominant plant species observed within the wetland included black gum (*Nyssa sylvatica*, FAC), pin oak (*Quercus palustris*, FACW), Eastern cottonwood (*Populus tremuloides*, FAC), northern spicebush (*Lindera benzoin*, FACW), winterberry (*Ilex verticilliata*, FACW), sassafras (*Sassafras albidum*, FACU), common greenbriar, (*Smilax rotundifolia*, FAC), yellow-fruit sedge (*Carex annectens*, FACW), royal fern (*Osmunda spectibilis*, OBL), and riverbank grape (*Vitis riparia*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 26 are mapped as Brems sand (BtA) and Oakville fine sand (OaC). The Brems and Oakville series were described above in section 3.2.2.14 Wetland 14. Soils at data point P12 were muck in texture with a matrix color of 10YR 2/1 in the upper 5 inches and a matrix color of 10YR 4/2 with 10YR 5/6 colored concentrations and 10YR 5/2 colored depletions from 5-10 inches. These soils were hydric based on indicator S5, Histosol.

Hydrology indicators observed within the wetland at the time of the delineation included secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.27 Wetland 27

Wetland 27 is a 1.00-acre forested wetland depression on the east side of Stream 3 to the west of Hadenfelt Road. The easternmost portions of this wetland are mapped in the NWI a as palustrine, forested, broad-leaved deciduous, temporary flooded wetland (PFO1A) wetland. The dominant plant species observed within the wetland included American elm (*Ulmus americana*, FACW), black gum (*Nyssa sylvatica*, FAC), brome sedge (*Carex bromoides*, FACW), cinnamon fern (*Osmundastrum cinnamomeum*, FACW), and royal fern (*Osmunda spectabilis*, OBL) as recorded on USACE data forms in Appendix C.

The soils within wetland 27 are mapped as Fluvaquents (Fh) and Plainfield sand (PlB). The Fluvaquents series consists of deep, nearly level, somewhat poorly drained soil on bottom lands that have generally short, steep slopes between them and the adjacent upland soils. The Plainfield series consists of gently sloping, deep, excessively drained soil on outwash plains, stream terraces, and glaciated uplands. Soils at data point P88 were peat to muck in texture with a matrix color of 10YR 3/2 in the upper 3 inches and a gleied matrix color of N 2.5/ from 3-16 inches. These soils were hydric based on indicator A10, 2cm muck.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: high water table (A2), saturation (A3), and water-stained leaves (B9) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was present at a depth of 10 inches with saturation present at 1 inch.

3.2.2.28 Wetland 28

Wetland 28 is a 0.01-acre forested depression between Wetland 27 and Stream 3. This wetland is mapped in the NWI a as palustrine, forested, broad-leaved deciduous, temporary flooded wetland (PFO1A) wetland. The dominant plant species observed within the wetland included green ash (*Fraxinus pennsylvanica*, FACW), northern spicebush (*Lindera benzoin*, FACW), rice-cut grass (*Leersia oryzoides*, OBL), and bladder sedge (*Carex intumescens*, FACW) as recorded on USACE data forms in Appendix C.

The soils within Wetland 28 are mapped as Fluvaquents (Fh). The Fluvaquents series was described above in section 3.2.2.27 Wetland 27. Soils at data point P89 were loamy clay in texture with a matrix color of 10YR 4/1 in the upper 8 inches with 10YR 5/1 colored depletions and 10YR 4/6 colored concentrations and a matrix color of 10YR 5/1 with 10YR 4/1 and 10YR 6/2 colored depletions and 10YR 5/6 and 10YR 5/8 colored concentrations from 8-12 inches. These soils were hydric based on indicator F3, depleted matrix.

Hydrology indicators observed within the wetland at the time of the delineation included primary

indicator water-stained leaves (B9) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5).

3.2.2.29 Wetland 29

Wetland 29 is a 1.06-acre forested wetland connected to Stream 4 to the west of the Dunes Creek tributary. This wetland is not mapped in the NWI. The dominant plant species observed within the wetland included red maple (*Acer rubrum*, FAC), pin oak (*Quercus palustris*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), northern spicebush (*Lindera benzoin*, FACW), poison ivy (*Toxicodendron radicans*, FAC), false nettle (*Boehmeria cylindrica*, OBL), bristly buttercup (*Ranunculus hispidus*, FAC), fowl mannagrass (*Glyceria striata*, OBL), northern bugleweed (*Lycopus uniflorus*, OBL), oriental bittersweet (*Celastrus orbiculatus*, FACU), Virginia creeper (*Parthenocissus quinquefolia*, FACU), and riverbank grape (*Vitis riparia*, FAC) as recorded on USACE data forms in Appendix C.

The soils within Wetland 29 are mapped as Oakville fine sand (OaC). The Oakville series was described above in section 3.2.2.14 Wetland 14. Soils at data point P39 were mucky sand to sandy in texture with a matrix color of 10YR 3/1 in the upper 12 inches and a matrix color of 10YR 4/1 from 12-20 inches. These soils were hydric based on indicator S1, sandy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary indicators: surface water (A1), high water table (A2), saturation (A3), and water marks (B1) and secondary indicators: moss trim lines (B16), geomorphic position (D2) and FAC-Neutral test (D5). Surface water was present to a depth of 2 inches with a water table and saturation present to the surface.

3.2.2.30 Wetland 30

Wetland 30 is a 0.96-acre forested, interdunal depression to the east of State Road 49. This wetland is mapped in the NWI as a as palustrine, forested, broad-leaved deciduous, temporary flooded wetland (PFO1A) wetland. The dominant plant species observed within the wetland included pin oak (*Quercus palustris*, FACW), American elm (*Ulmus americana*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), meadow garlic (*Allium canadense*, FACU), fowl manna-grass (*Glyceria striata*, OBL), and oriental bittersweet (*Celastrus orbiculatus*, FACU) as recorded on USACE data forms in Appendix C.

The soils within Wetland 30 are mapped as Brems sand (BtA), Plainfield sand, and Morroco loamy sand (MuuA). The Brems series was described above in section 3.2.2.14 Wetland 14. The Plainfield series was described above in section 3.2.2.28 Wetland 28. The Morocco series consists of nearly level, deep, somewhat poorly drained soil on outwash plains. Soils at data point P41 were mucky to sandy in texture with a matrix color of 10YR 3/1 in the upper 8 inches and a matrix color of 10YR 4/ w1ith 10YR 5/8 colored concentrations 8-16 inches. These soils were hydric based on indicators A11, depleted below dark surface and F1, loamy mucky mineral.

Hydrology indicators observed within the wetland at the time of the delineation included primary

indicators: high water table (A2), saturation (A3), sparsely vegetated concave surface (B8) and water-stained leaves (B9) and secondary indicators: geomorphic position (D2) and FAC-Neutral test (D5). A water table was observed at a depth of 4 inches below the surface with saturation present throughout the profile.

TABLE 4. SUMMARY OF WETLAND FEATURES IDENTIFIED ON SITE.

Wetland Name	Acres	Class	Data Points	Photos	Jurisdictional Status
	710.00	0.0.00	P44, P48, P50, P52,	42, 43, 46 -	
Wetland 01	21.25	FO	P53, P54, P57	55, 58, 59	Jurisdictional
Wetland 02	8.23	EM	P46, P56	44, 45, 56, 57	Jurisdictional
Wetland 03	0.46	EM	P61	62, 63	Jurisdictional
			P59, P62, P64, P65,		
Wetland 04	15.45	FO	P67	64 - 71	Jurisdictional
Wetland 05	12.40	FO	P73	78, 79	Jurisdictional
Wetland 06	0.64	FO	P79	74, 75	Jurisdictional
Wetland 07	11.17	FO	P71, P74, P76	76, 77, 80 - 83	Jurisdictional
Wetland 08	6.23	FO	P78	84, 85	Jurisdictional
Wetland 09	4.07	FO/EM	P79	86, 87	Jurisdictional
Wetland 10	1.84	EM	P81	88, 89	Jurisdictional
Wetland 11	0.06	FO	P35	34, 35	Jurisdictional
Wetland 12	0.01	EM	P33	32, 33	Jurisdictional
Wetland 13	0.23	FO	P37	36, 37	Jurisdictional
Wetland 14	1.61	FO	P31	31, 31.1	Jurisdictional
Wetland 15	1.11	FO	P29	29, 30	Jurisdictional
Wetland 16	0.16	FO	P27	27, 28	Jurisdictional
Wetland 17	1.18	FO	P01, P24, P26	1, 2, 23 - 26	Jurisdictional
Wetland 18	0.42	FO	P22	21, 22	Jurisdictional
Wetland 19	0.11	FO	P20		Jurisdictional
Wetland 20	0.68	FO	P18	19, 20	Jurisdictional
Wetland 21	0.07	FO	P03	3, 4	Jurisdictional
Wetland 22	0.68	FO	P16	17, 18	Jurisdictional
Wetland 23	0.08	FO/EM	P14	15, 16	Jurisdictional
Wetland 24	0.30	FO	P05, P06	5 - 8	Jurisdictional
Wetland 25	0.03	FO	P08	9, 10	Jurisdictional
Wetland 26	0.22	FO	P12	13, 14	Jurisdictional
Wetland 27	1.00	FO	P88	90, 91	Jurisdictional
Wetland 28	0.009	FO	P89	92, 93	Jurisdictional
Wetland 29	1.06	FO	P39	38, 39	Jurisdictional
Wetland 30	0.96	FO	P41	40, 41	Jurisdictional

3.2.3 Uplands

The uplands on the Property consist of upland forest, agricultural field, and prairie. The dominant species observed within the upland areas included American elm (Ulmus americana, FACW), American basswood (Tilia americana, FACU), American beech (Fagus grandifolia, FACU), red maple (Acer rubrum, FAC), silver maple (Acer saccharinum, FACW), black cherry (Prunus serotina, FACU), chokecherry (Prunus virginiana, FACU), red maple (Quercus rubra, FACU), black oak (Quercus velutina, UPL), white oak (Quercus alba, FACU), burr oak (Quercus macrocarpa, FACU), tulip poplar (Liriodendron tulipifera, FACU), black gum (Nyssa sylvatica, FAC), quaking aspen (Populus tremuloides, FAC), green ash (Fraxinus pennsylvanica, FACW), prickly ash (Zanthoxylem americanum, FACU), sassafras (Sassafras albidum, FACU), grey dogwood (Cornus racemosa, FAC), lowbush blueberry (Vaccinium angustifolium, FACU), hillside blueberry (Vaccinium pallidum, UPL), multiflora rose (Rosa multiflora, FACU), Missouri gooseberry (Ribes missouriense, UPL), American holly (Ilex opaca, FACU), winterberry (Ilex verticillata, FACU), autumn olive (Elaeagnus umbellata, UPL), Bell's honeysuckle (Lonicera x bella, FACU), northern spicebush (Lindera benzoin, FACW), witch-hazel (Hamamelis virginiana, FACU), border privet (Ligustrum obtusifolium, UPL), European privet (Ligustrum vulgare, FACU), barberry (Berberis vulgaris, FACU), burning bush (Euonymus alatus, UPL), common blackberry (Rubus allegheniensis, FACU), common dewberry (Rubus flagellaris, FACU), Kentucky bluegrass (Poa pratensis, FACU), tall fescue (Festuca arundinacea, FACU), Pennsylvania sedge (Carex pennsylvanica, UPL), slender yellow wood sorrel (Oxalis dillenii, FACU), common dandelion (Taraxaxum officinale, FACU), spotted touch-me-not (Impatiens capensis, FACW), periwinkle (Vinca minor, UPL), white rattlesnake root (Nabalus albus, FACU), old field panic-grass (Dichanthelium implicatum, FAC), sweet cicely (Osmorhiza claytonii, FACU), star flowered lily-of-the-valley (Maianthemum stellatum, FAC), woodbine (Clematis virginiana, FAC), Queen Anne's lace (Daucus carota, UPL), white clover (Trifolium repens, FACU), cinnamon fern (Osmubdastrum cinnamomeum, FACW), lily-of-the-valley (Convallaria majalis, UPL), partridgeberry (Mitchella repens, FACU), broadleaf plantain (Plantago major, FACU), skunk cabbage (Symplocarpus foetidus, OBL), roughstemmed goldenrod (Solidago rugosa, FAC), tapered rosette grass (Dichanthelium acuminatum, FAC), Canada mayflower (Maianthemum canadense, FACU), field horsetail (Equisetum arvense, FAC), Eastern woodland sedge (Carex blanda, FAC), jack-in-the-puplit (Arisaema triphyllum, FAC), golden ragwort (Packera aurea, FACW), jointleaf rush (Junus articulatus, OBL), ribwort plantain (Plantago lanceolata, FACU), sensitive fern (Onoclea sensibilis, FAC), Canada goldenrod (Solidago canadensis, FACU), swamp agrimony (Agrimonia parviflora, FAC), bladder sedge (Carex intumescens, FACW), prairie broomweed (Amphyacyris dracunculoides, UPL), American hog-peanut (Amphicarpaea bracteate, FAC), spotted knapweed (Centaurea stoebe, UPL), bracken fern (Pteridium aquilinum, FACU), white avens (Geum canadense, FAC), American cancer-root (Conopholis americana, UPL), common cinquefoil (Potentilla simplex, FACU), bristly greenbriar (Smilax tamnoides, FAC), common greenbriar (Smilax rotundifolia, FAC), poison ivy (Toxicodendron radicans, FAC), fox grape (Vitis labrusca, FACU), riverbank grape (Vitis riparia, FAC), oriental bittersweet (Celastrus orbiculatus, FACU), and Virginia creeper (Parthenocissus quinquefolia, FACU) as recorded on USACE data forms in Appendix C.

Soils within the upland areas are mapped as Brems sand (BtA), Oakville find sand (Oac), Maumee loamy sand (Mm, Mn).

Upland data points are separated into roughly four main categories: the Calumet Trail, road prism, abandoned roadbed, and upland forest. Data points P2, P4, P13, P15, P17, P19, and P21 were all taken from the road prism along Furnessville Road; P58 was taken from the road prism on the east side of Broadway Avenue. These soils were typically sandy in texture with gravel throughout and generally had a matrix color of 10YR 3/2 in the upper 5 to 10 inches and a matrix color of 10YR 4/3 in the second horizon with no mottles in the upper horizons.

Soils at data points P47, P49, P51, P63, P66, P72, P75, and P77 were taken from abandoned roadbeds to the north of the Calumet Trail; P32 was taken from within the old roadbed of Teale Drive south of Highway 12. All of these roadbeds with the exception of data point P32, taken from Teale Drive, were forested. Soils were generally sandy in texture with some data points having a buried A horizon that was mucky to clayey in texture. Matrix colors ranged from 10YR 3/2, 10YR 3/3, 10YR 4/2, and 10YR 4/3 in the upper horizons. Gravel fill was often observed just below the thin soil horizons or throughout the profile.

Soils at data points P7, P9, P11, P23, P25, P28, P30, P34, P36, P38, P39, P42, P68, P82, P83, P84, P90, and P92 were all taken from the upland forested within the project limits. Soils were sandy in texture and typically had matrix colors of 10YR 3/1, 10YR 4/2, and 10YR 5/3 in the upper 10 inches. Most of these soils had no mottles or very few, faint concentrations in the lower 12 inches.

Soils at data points P43, P45, P55, P60, and P80 were taken from the Calumet Trail. This trail is a gravel path that runs through the NIPSCO easement to the south of the Indiana Dunes State Park. All of these soils were characterized by a mixture of sandy gravel fill.

Several of the upland data points had either hydric soils (P2, P12, P14) or hydrophytic vegetation (P6, P14) but none of these points had a second wetland indicator (hydrology, vegetation, or soils).

4.0 Discussion and Conclusions

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Soil Solutions, Inc. performed a wetland determination, Glenn Peterson, SEH Inc, along a 6.8-mile project area that runs between the towns of Chesterton and Beverly Shores, Indiana. The purpose of this project was to identify and mark wetlands along a proposed trail route for the Marquette Greenway Trail – Calumet section between the Dune Park Train Station at Highway 12 and State Road 49 in the town of Porter to Lake Shore County Road in the town of Beverly Shores.

The information provided, including the location of the wetland boundary and my professional opinions, herein presented, are intended to accurately represent the conditions of the property at the time of the inventory and survey.

Respectfully Submitted,

Lydia Miramontes Loyd Soil Solutions, Inc.

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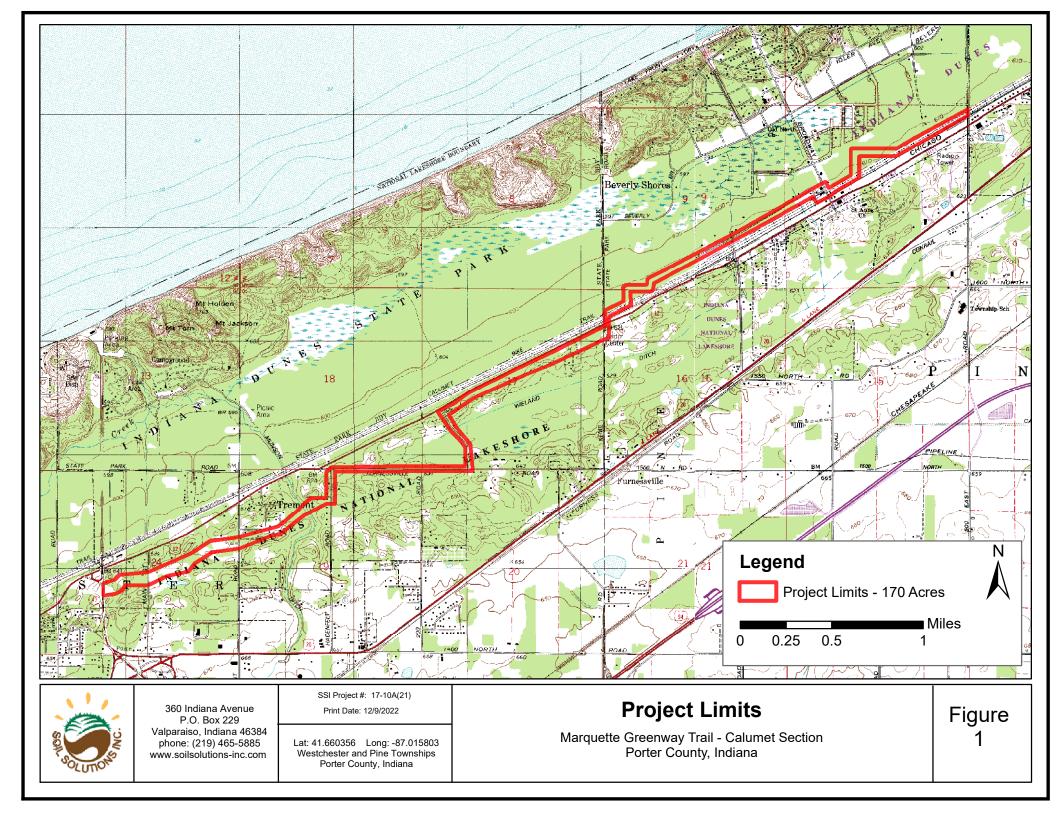
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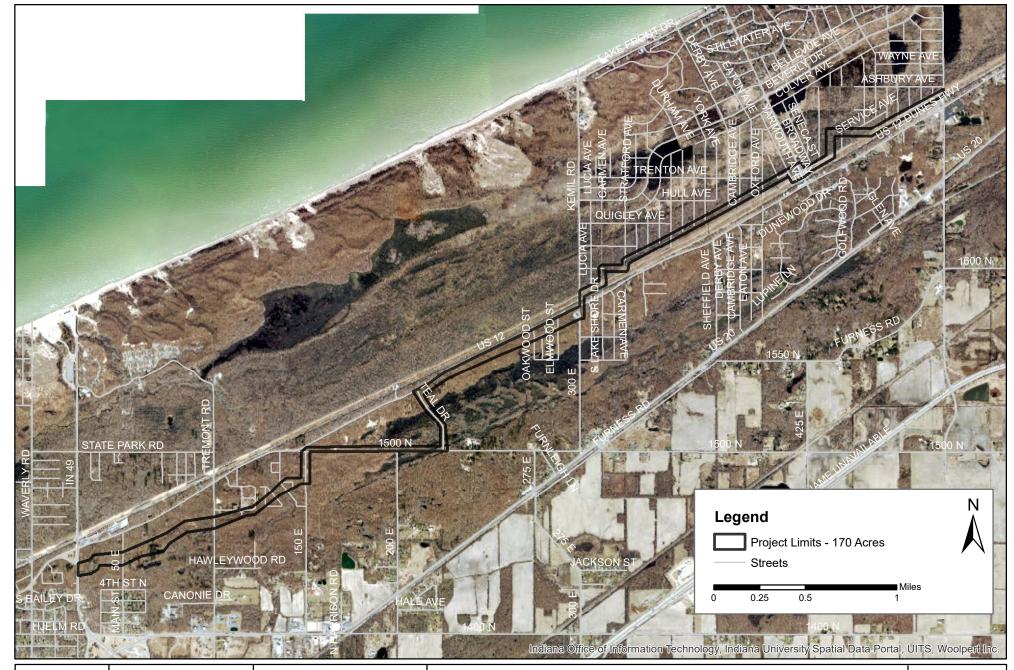
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APPENDIX A REPORT FIGURES





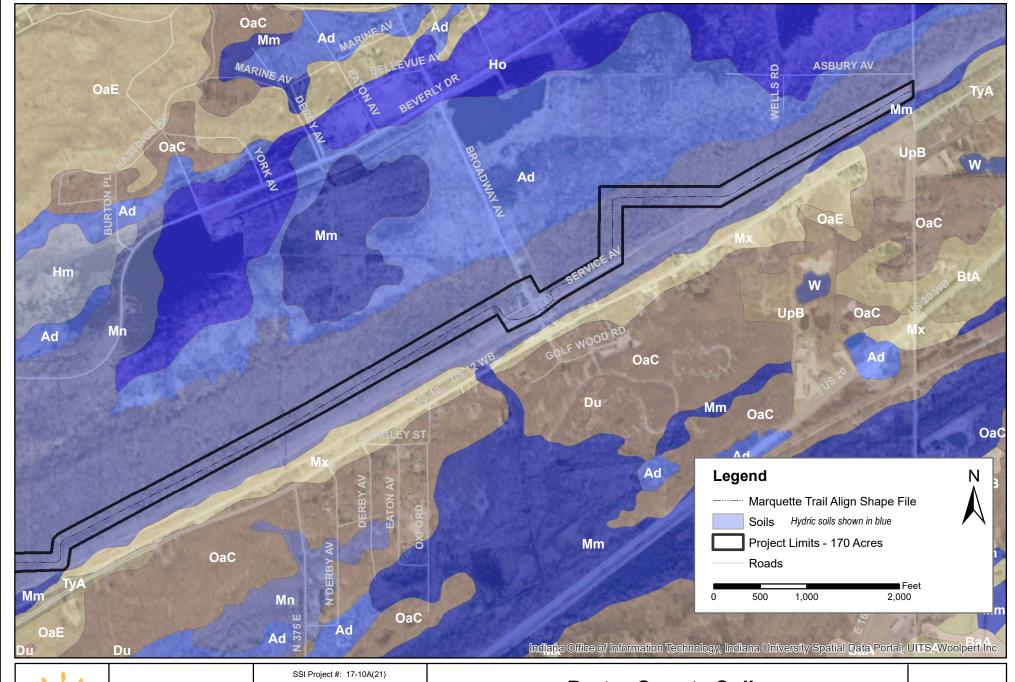


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Print Date: 12/9/2022

Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

Project Limits - 2018 Aerial

Marquette Greenway Trail - Calumet Section Porter County, Indiana Figure 2





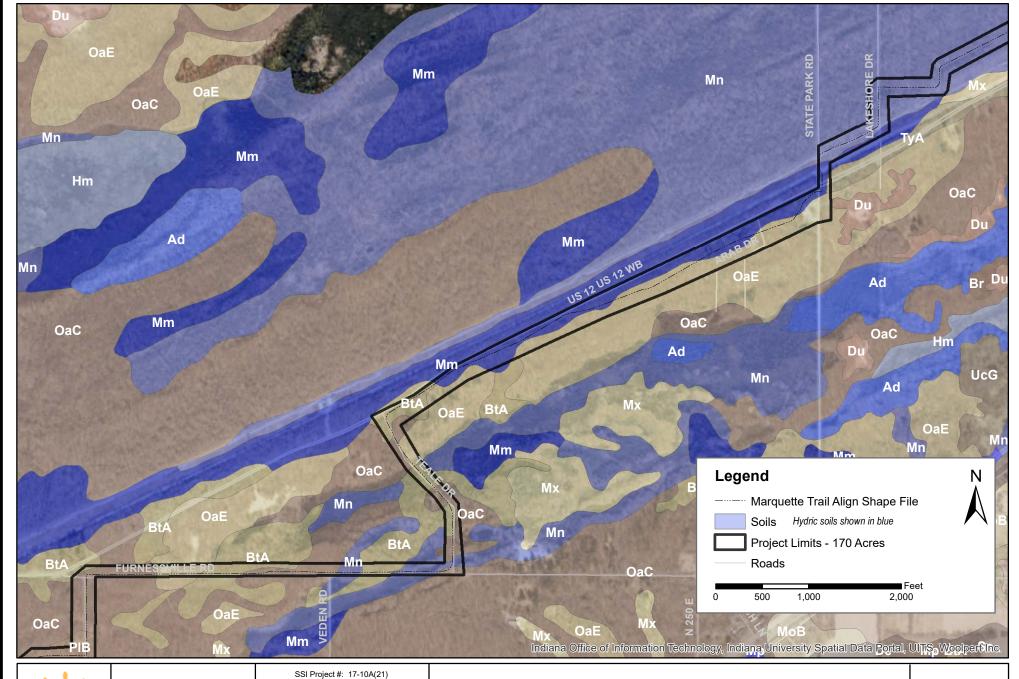
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Porter County Soils

Marquette Greenway Trail - Calumet Section Porter County, Indiana

Figure 3.1



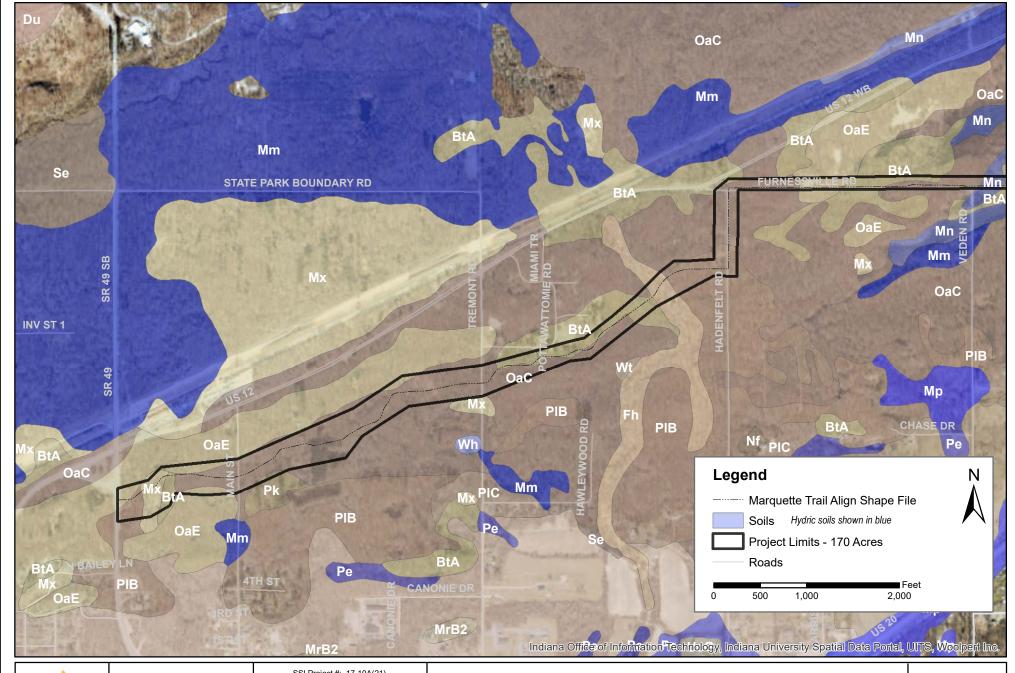


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Porter County Soils

Marquette Greenway Trail - Calumet Section Porter County, Indiana Figure 3.2



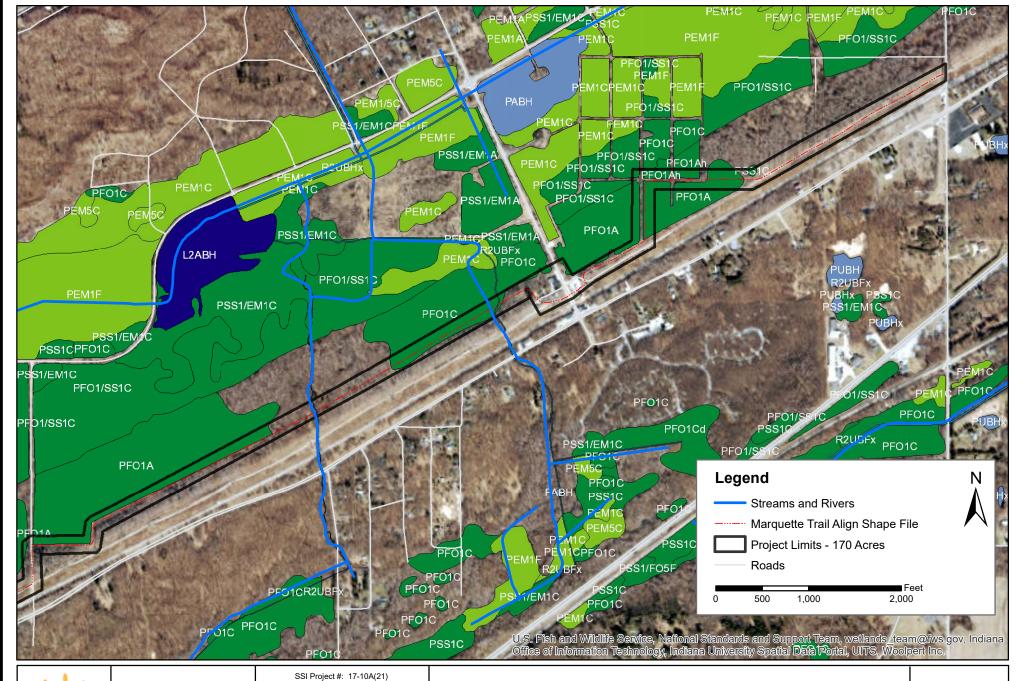


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Porter County Soils

Marquette Greenway Trail - Calumet Section Porter County, Indiana Figure 3.3



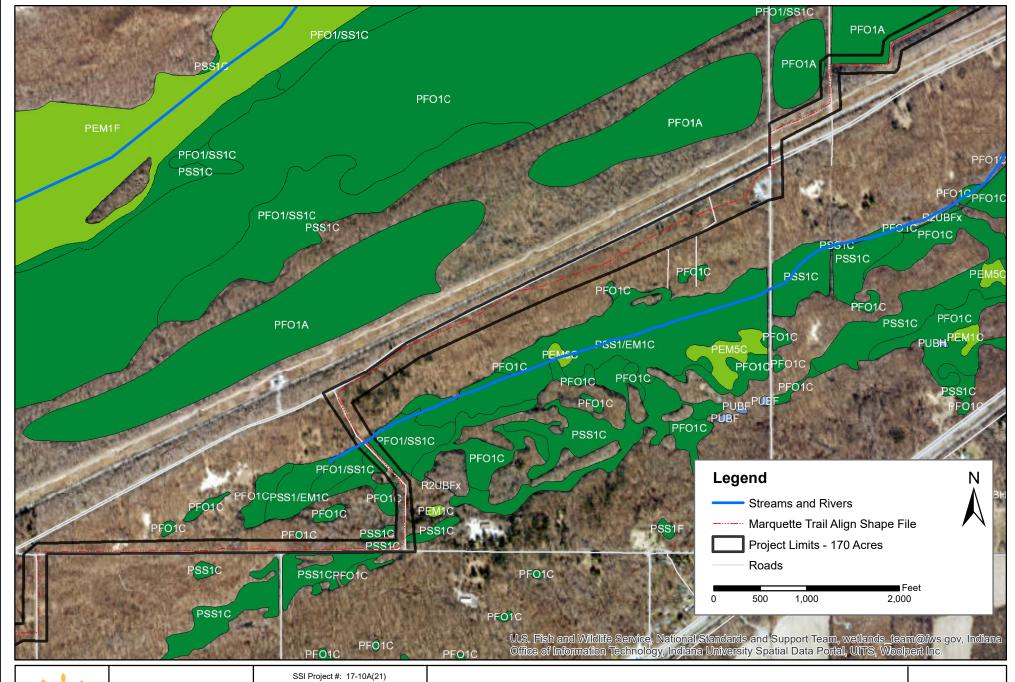


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Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

National Wetland Inventory

Marquette Greenway Trail - Calumet Section Porter County, Indiana Figure 4.1



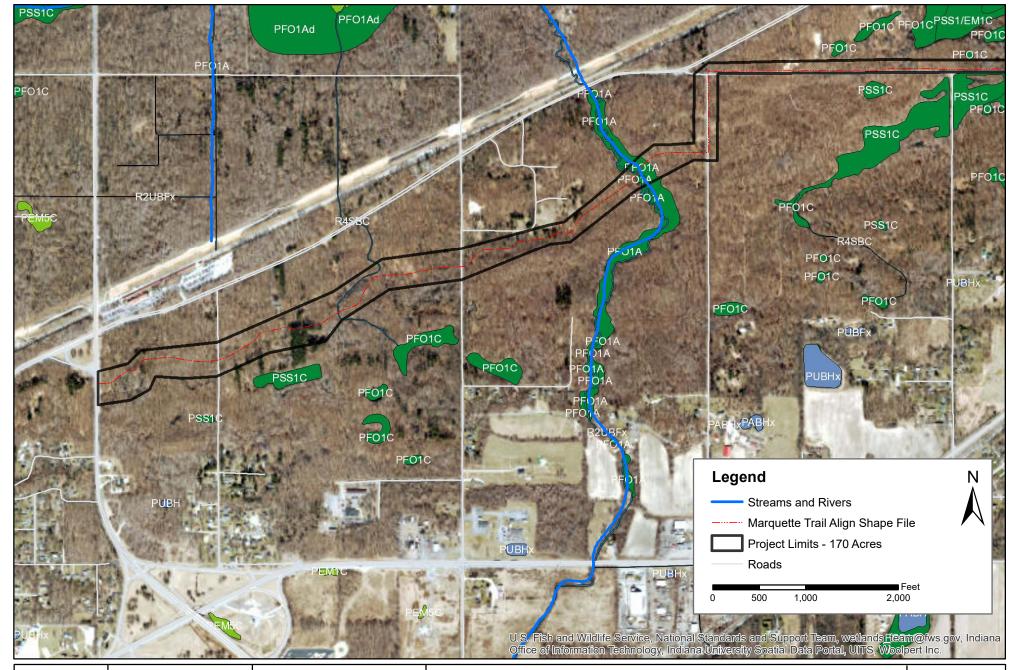


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Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

National Wetland Inventory

Marquette Greenway Trail - Calumet Section Porter County, Indiana Figure 4.2



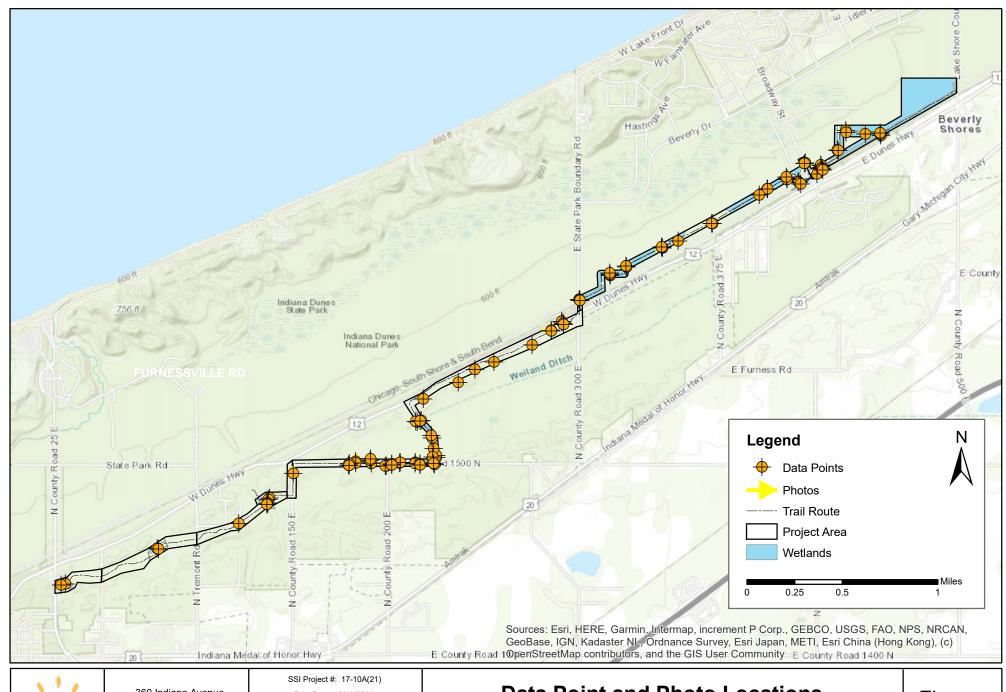


SSI Project #: 17-10A(21)
Print Date: 12/9/2022

Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

National Wetland Inventory

Marquette Greenway Trail - Calumet Section Porter County, Indiana Figure 4.3



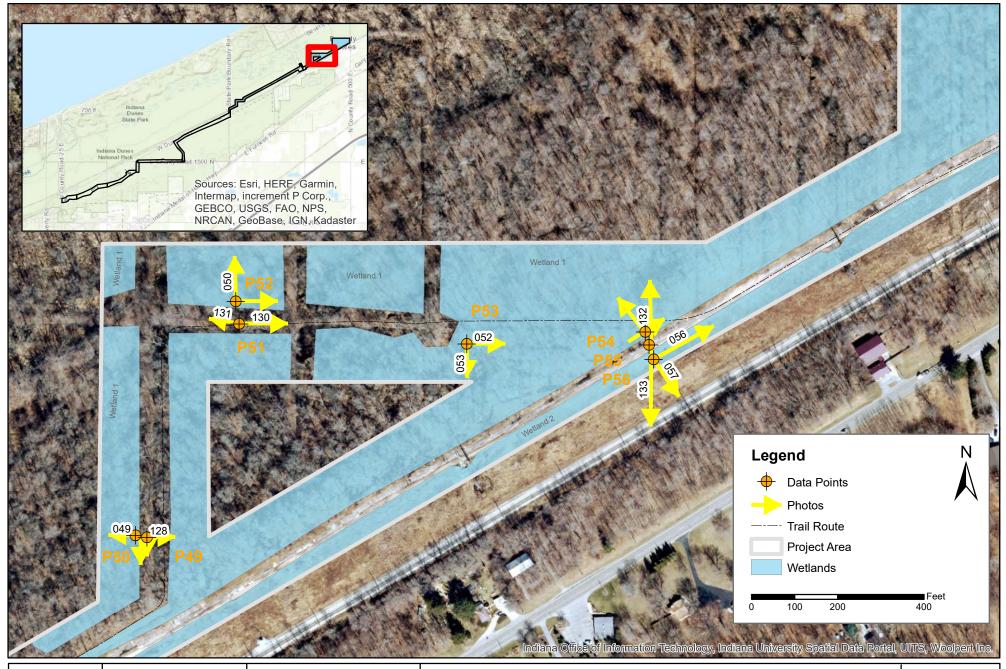


Print Date: 12/12/2022

Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



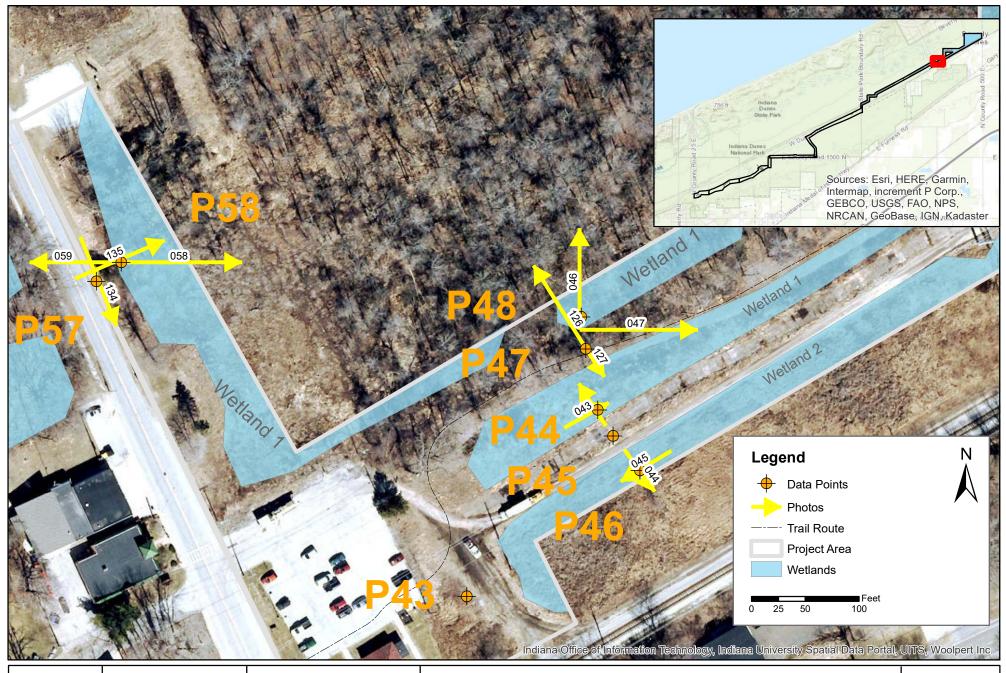


SSI Project #: 17-10A(21)
Print Date: 12/12/2022

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Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



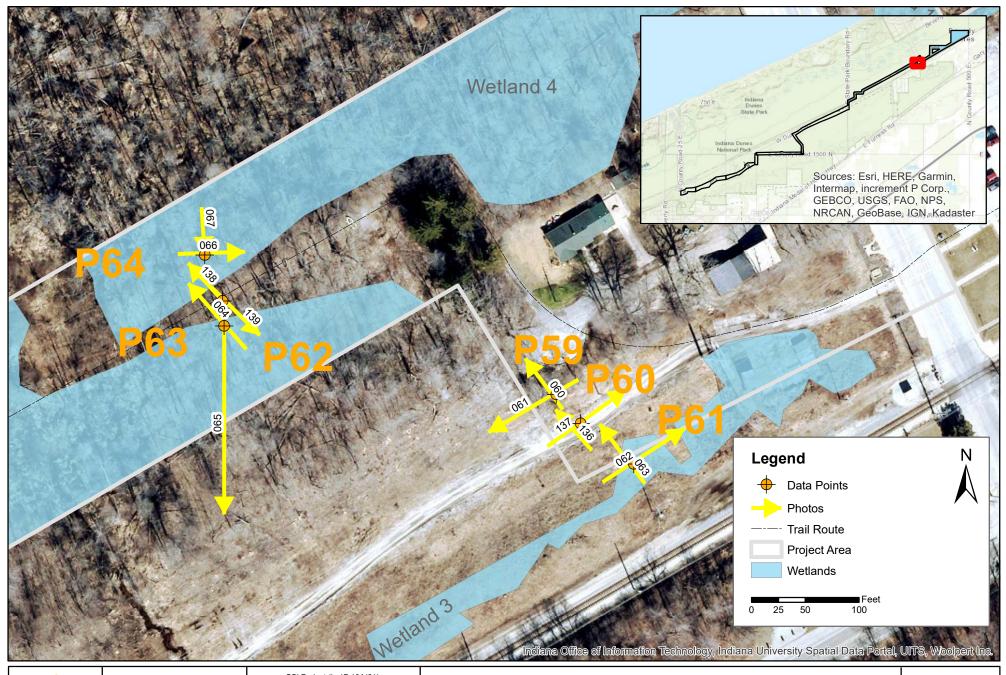


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Print Date: 12/12/2022

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Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



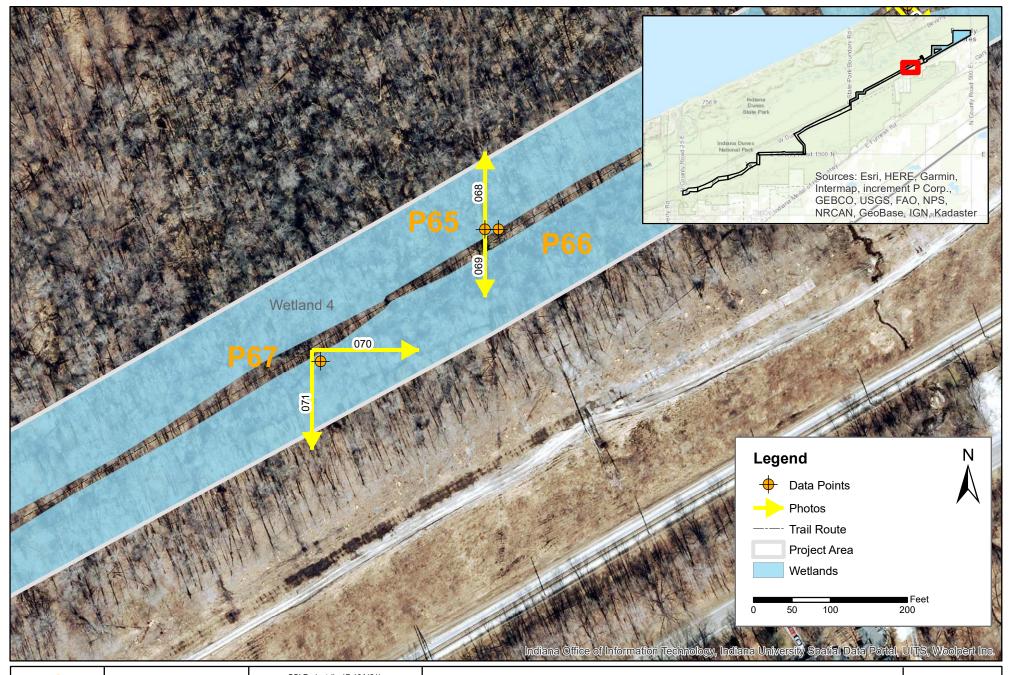


SSI Project #: 17-10A(21)
Print Date: 12/12/2022

Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



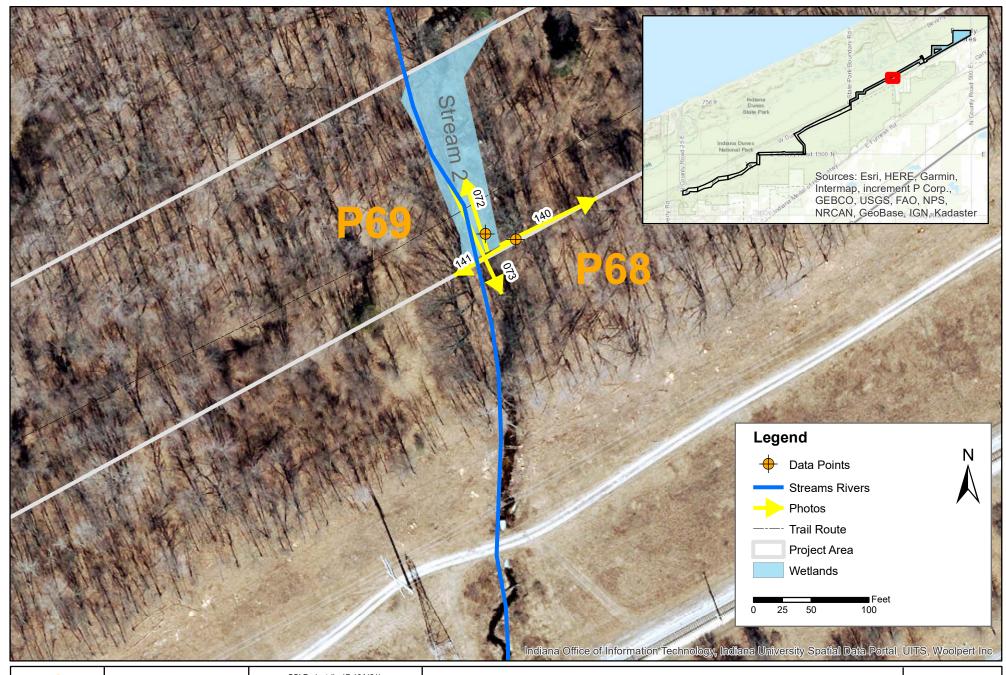


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Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



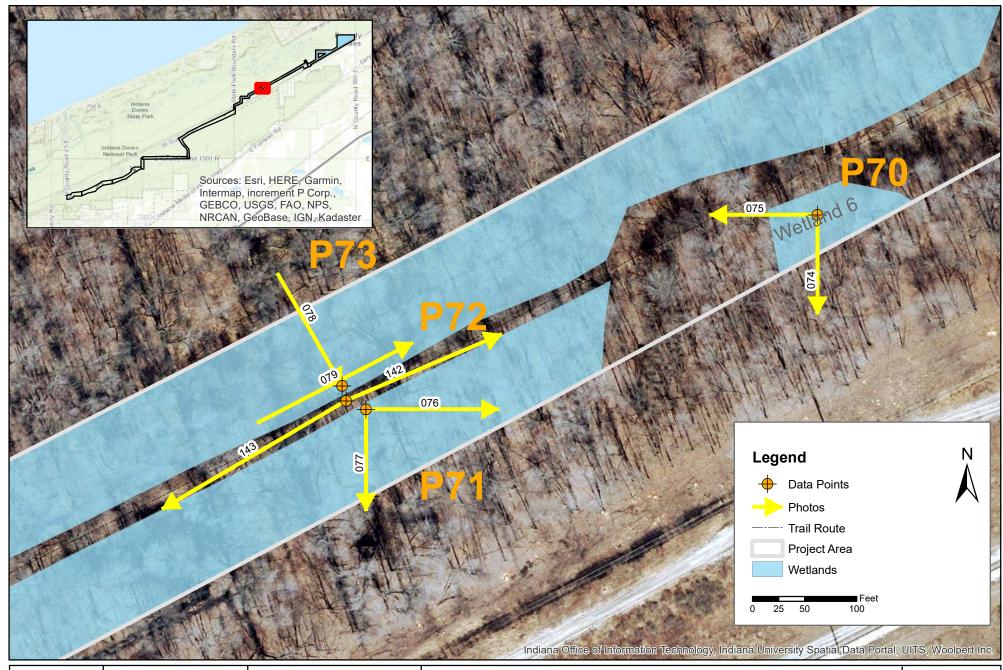


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Print Date: 12/12/2022

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Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



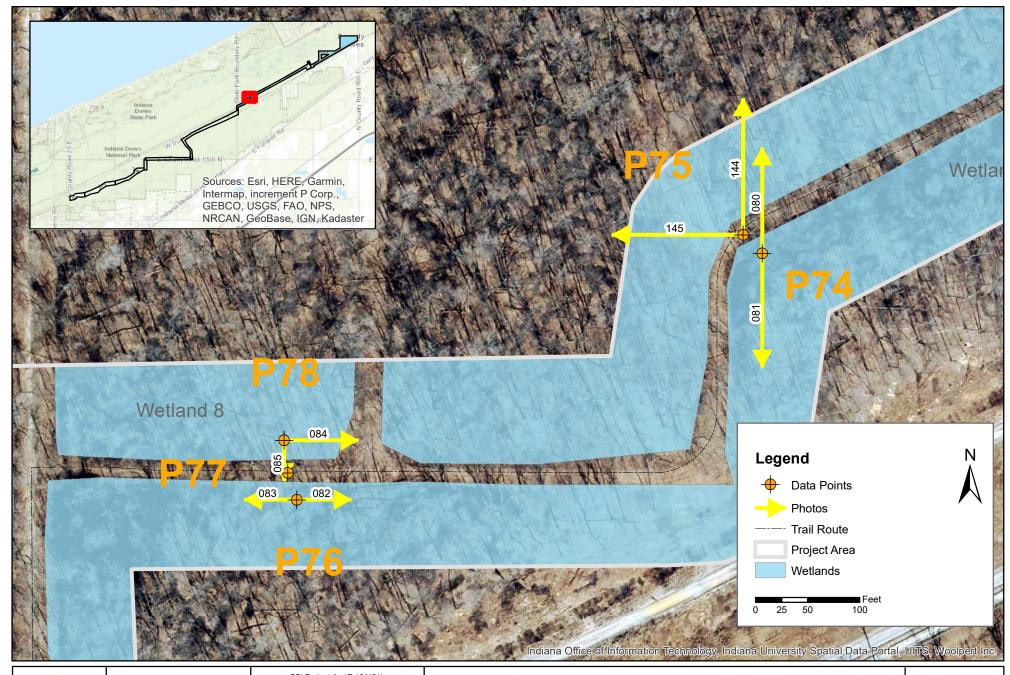


SSI Project #: 17-10A(21)
Print Date: 12/12/2022

Lat: 41.660356 Long: -87.015803 Westchester and Pine Townships Porter County, Indiana

Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



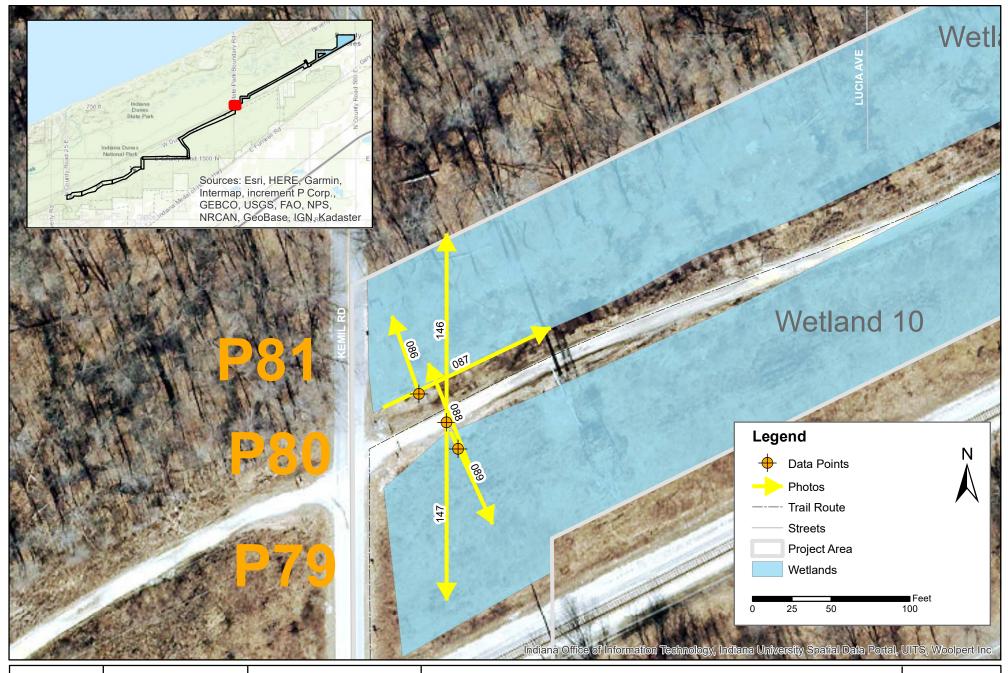


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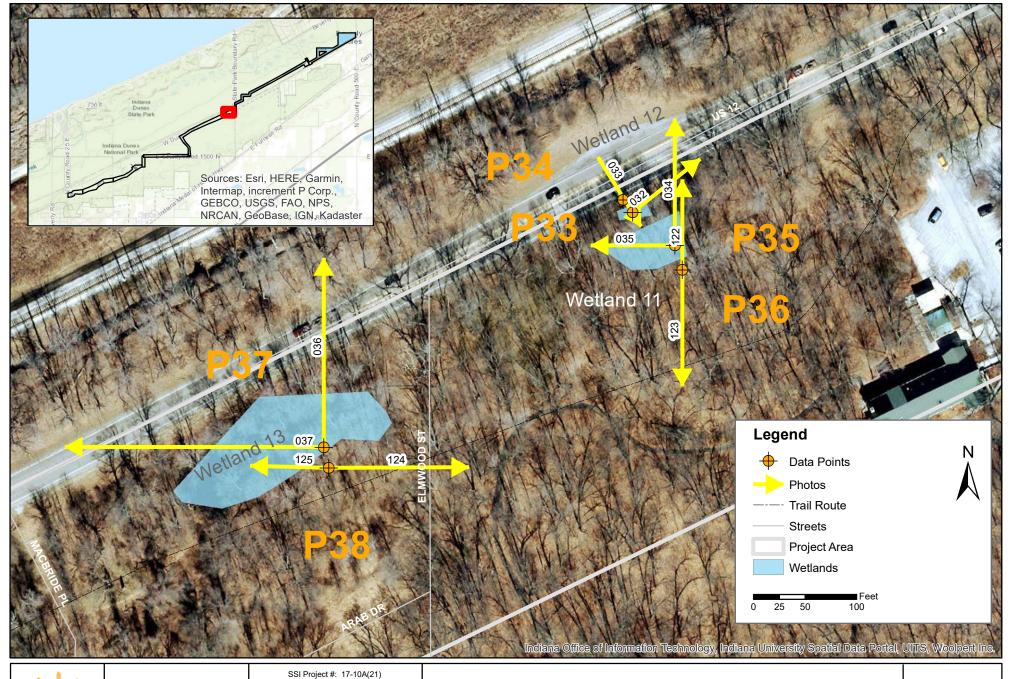


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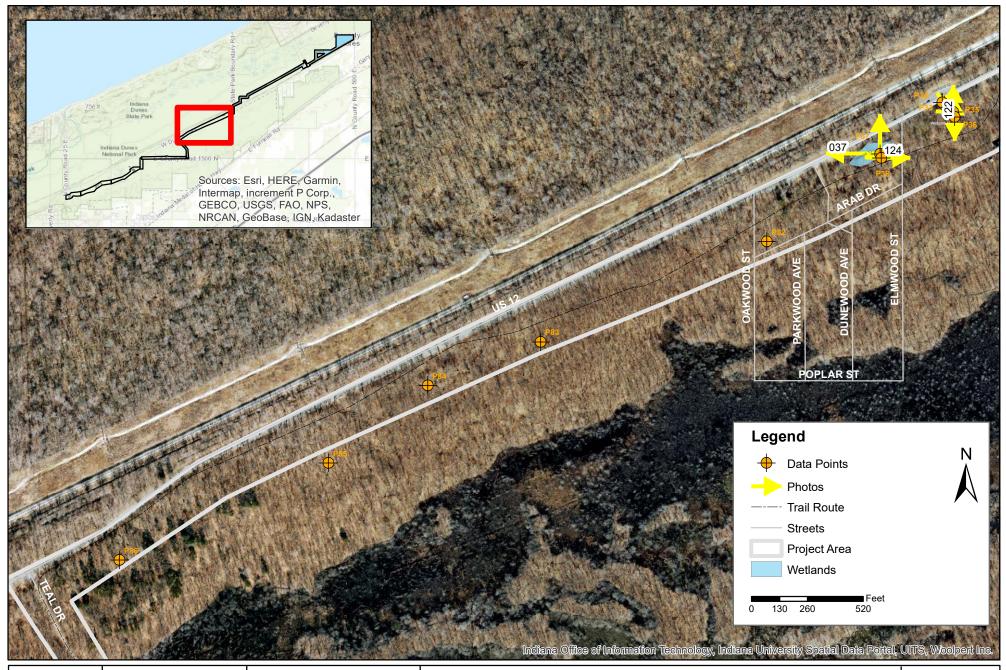


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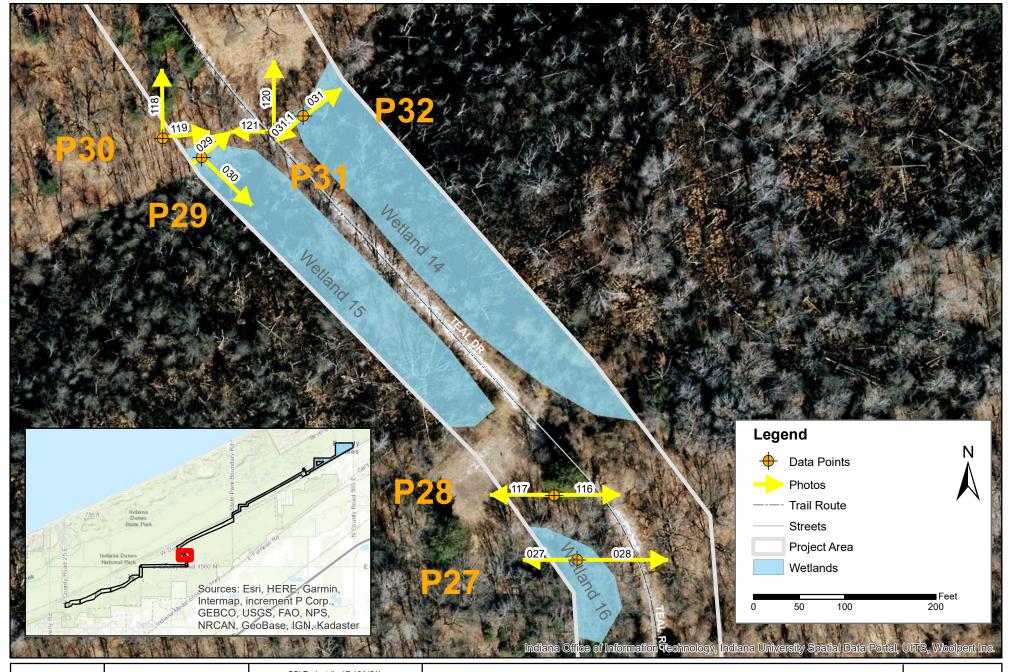


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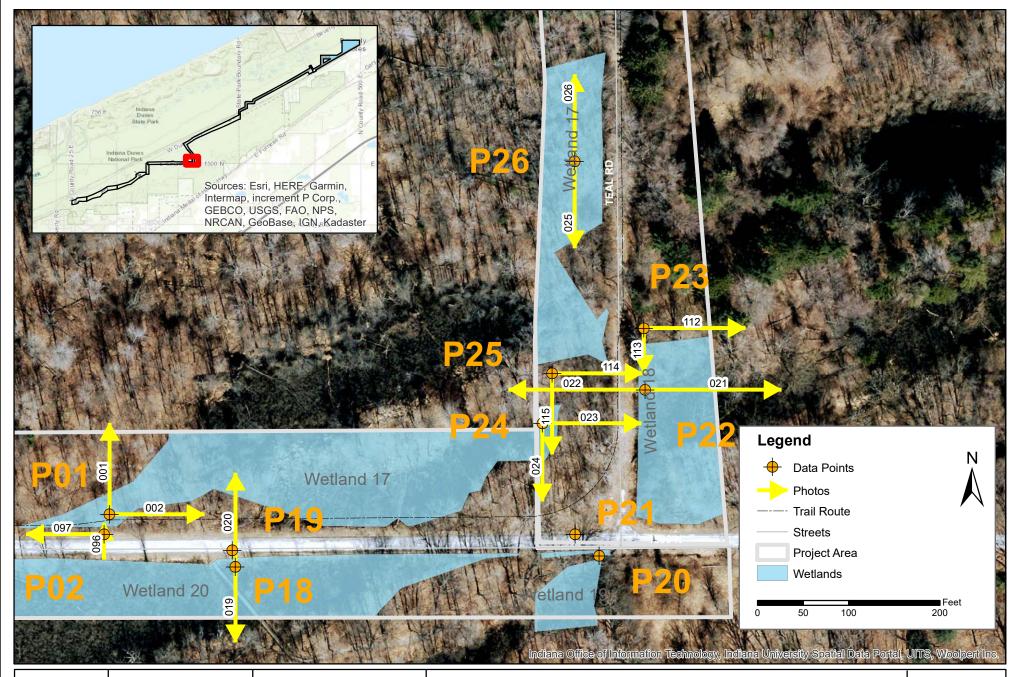


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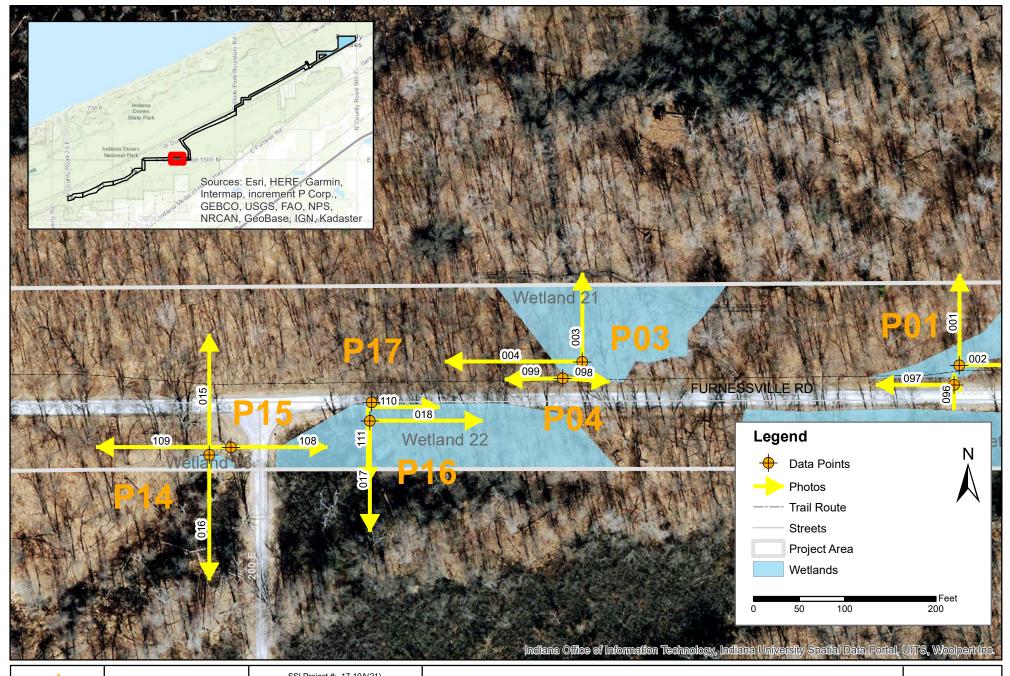


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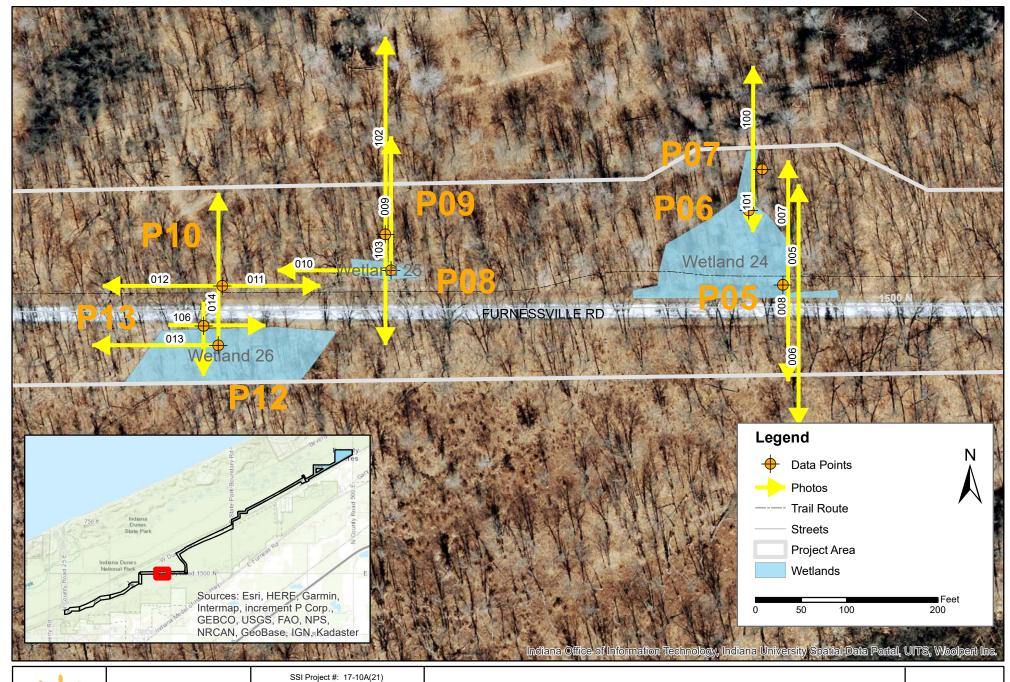


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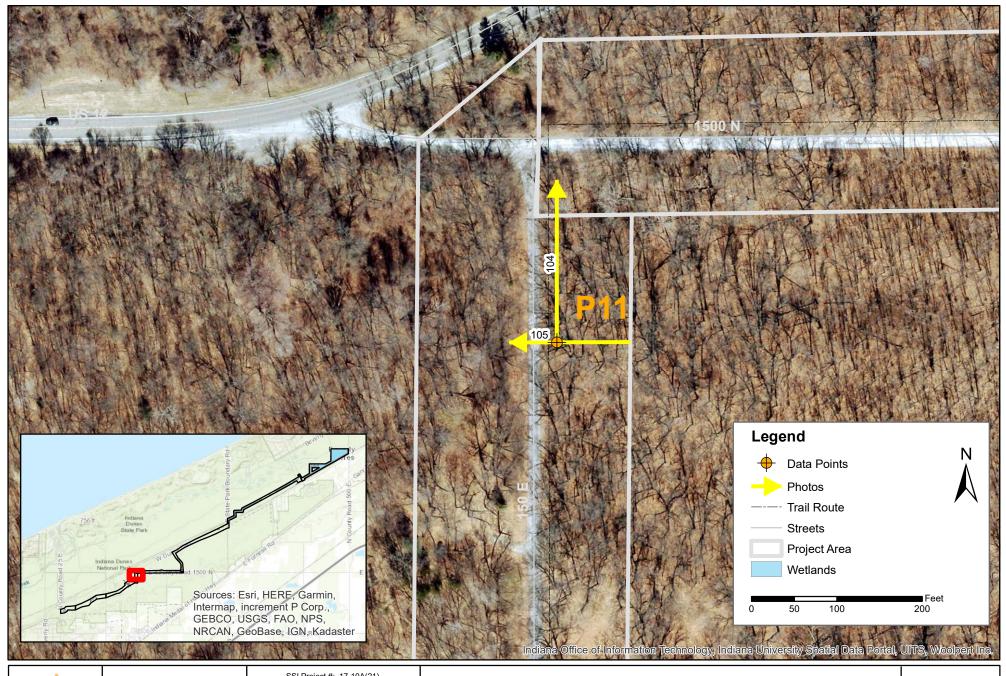


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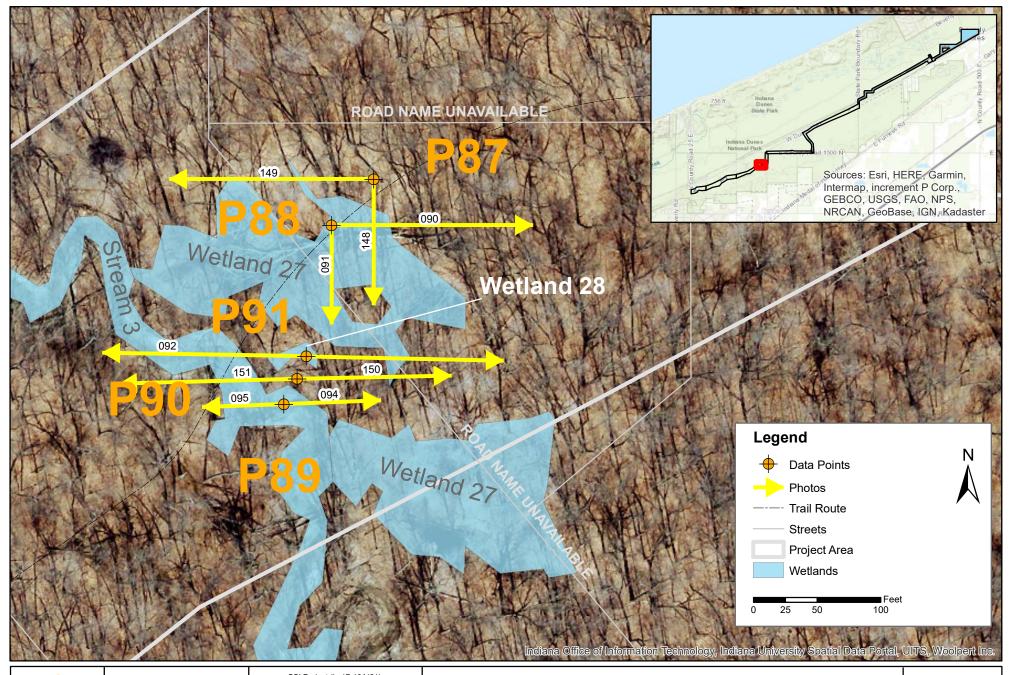


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Data Point and Photo Locations

Marquette Greenway Trail - Calumet Section Porter County, Indiana



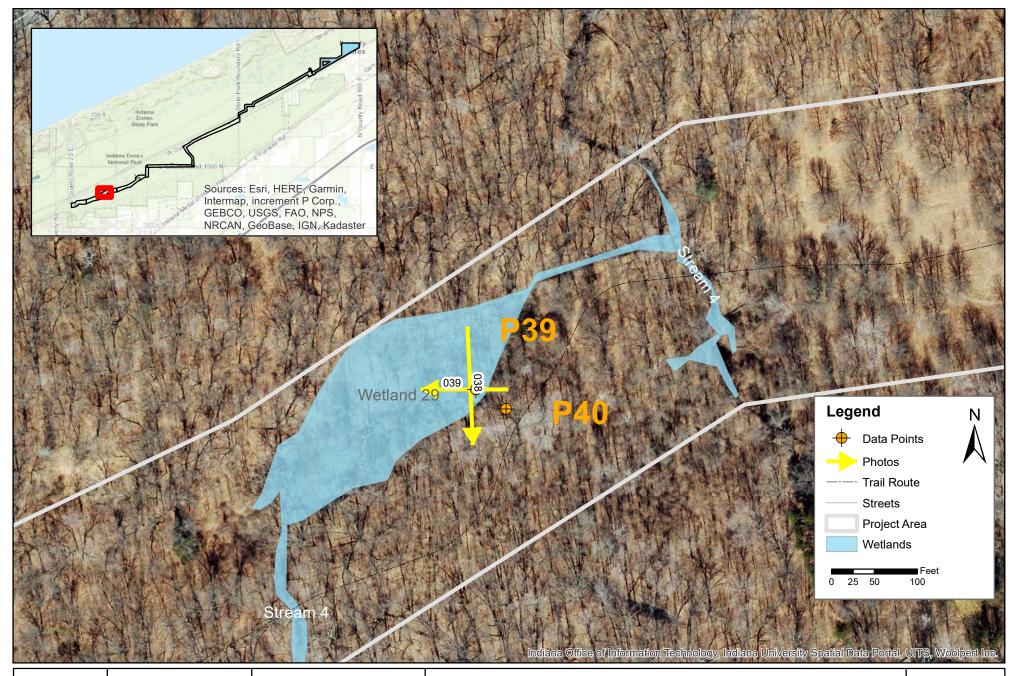


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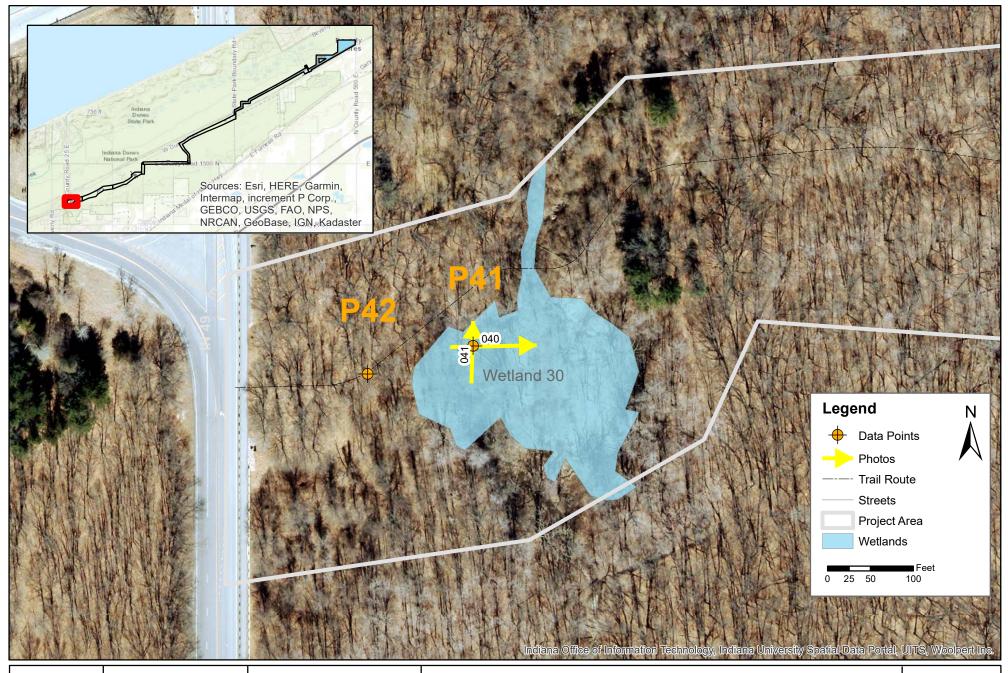


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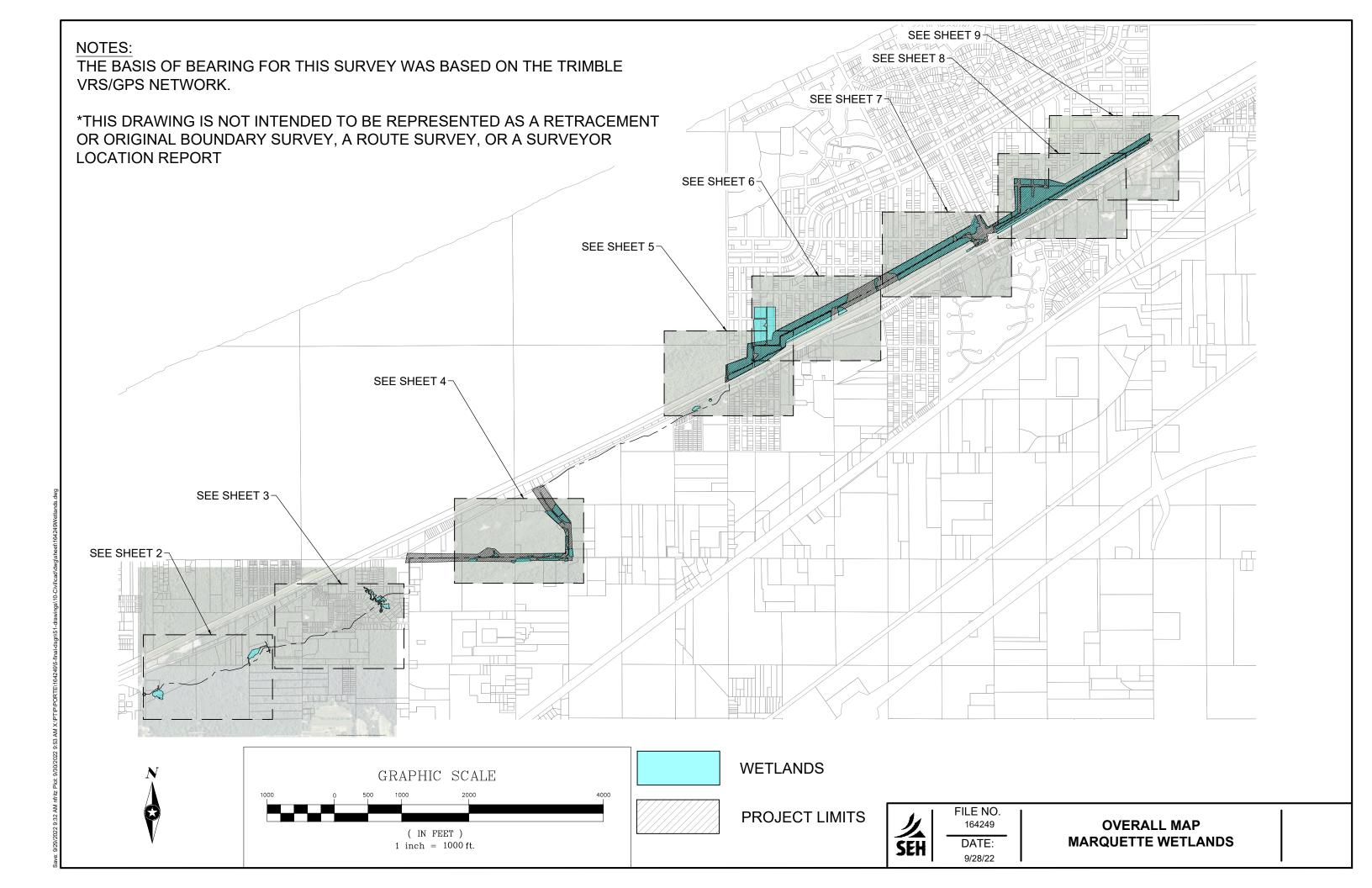
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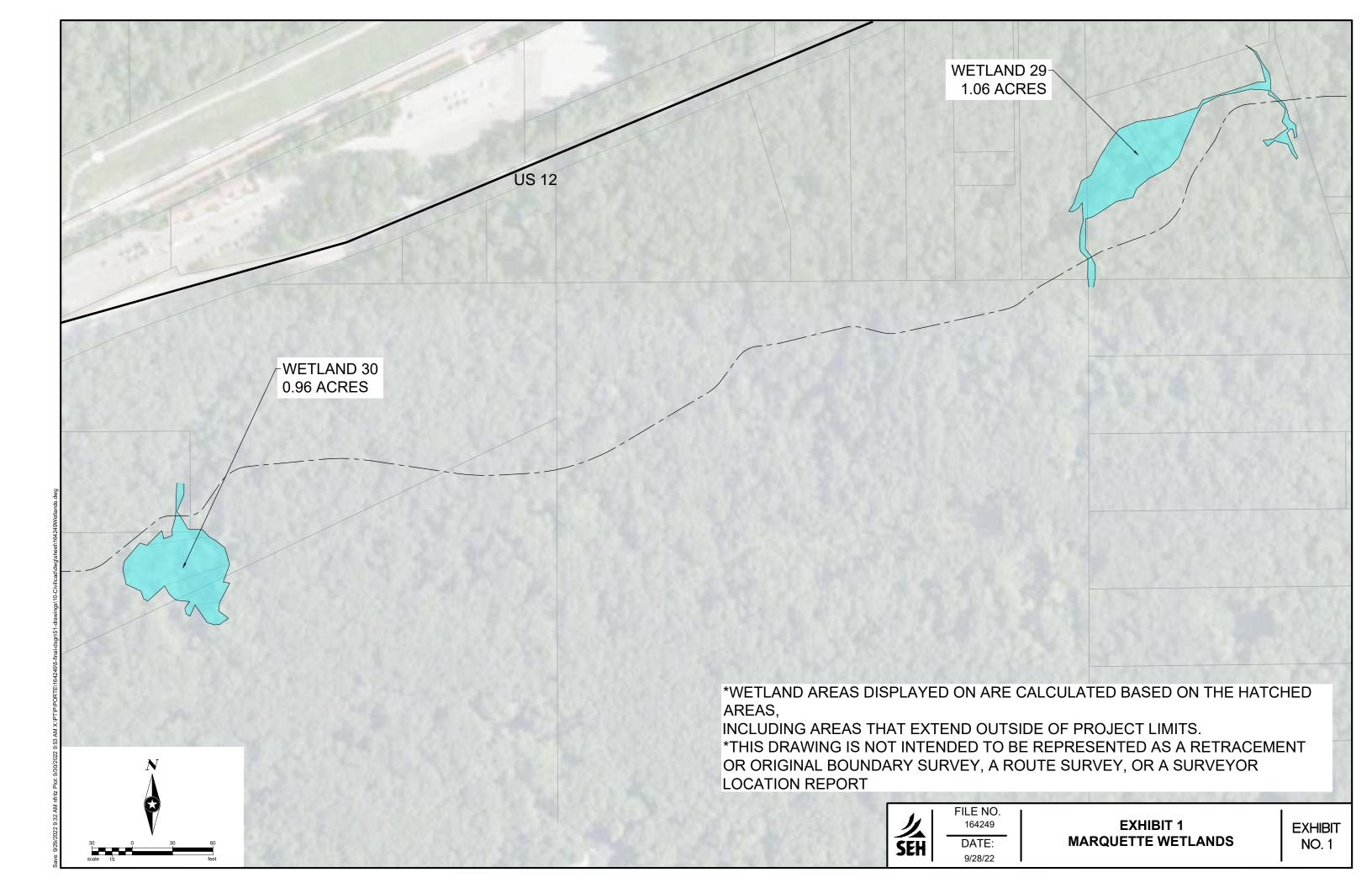
Data Point and Photo Locations

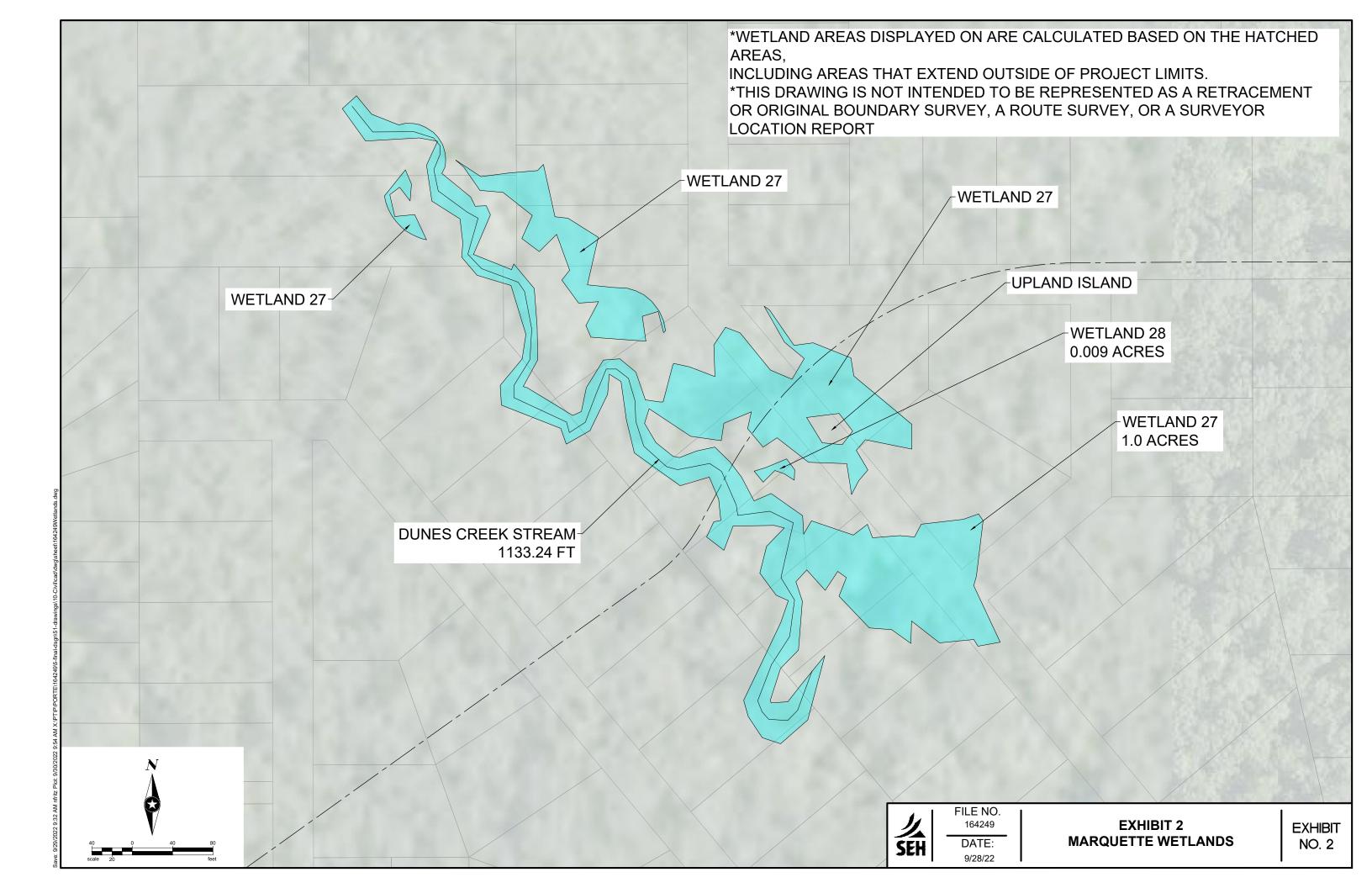
Marquette Greenway Trail - Calumet Section Porter County, Indiana

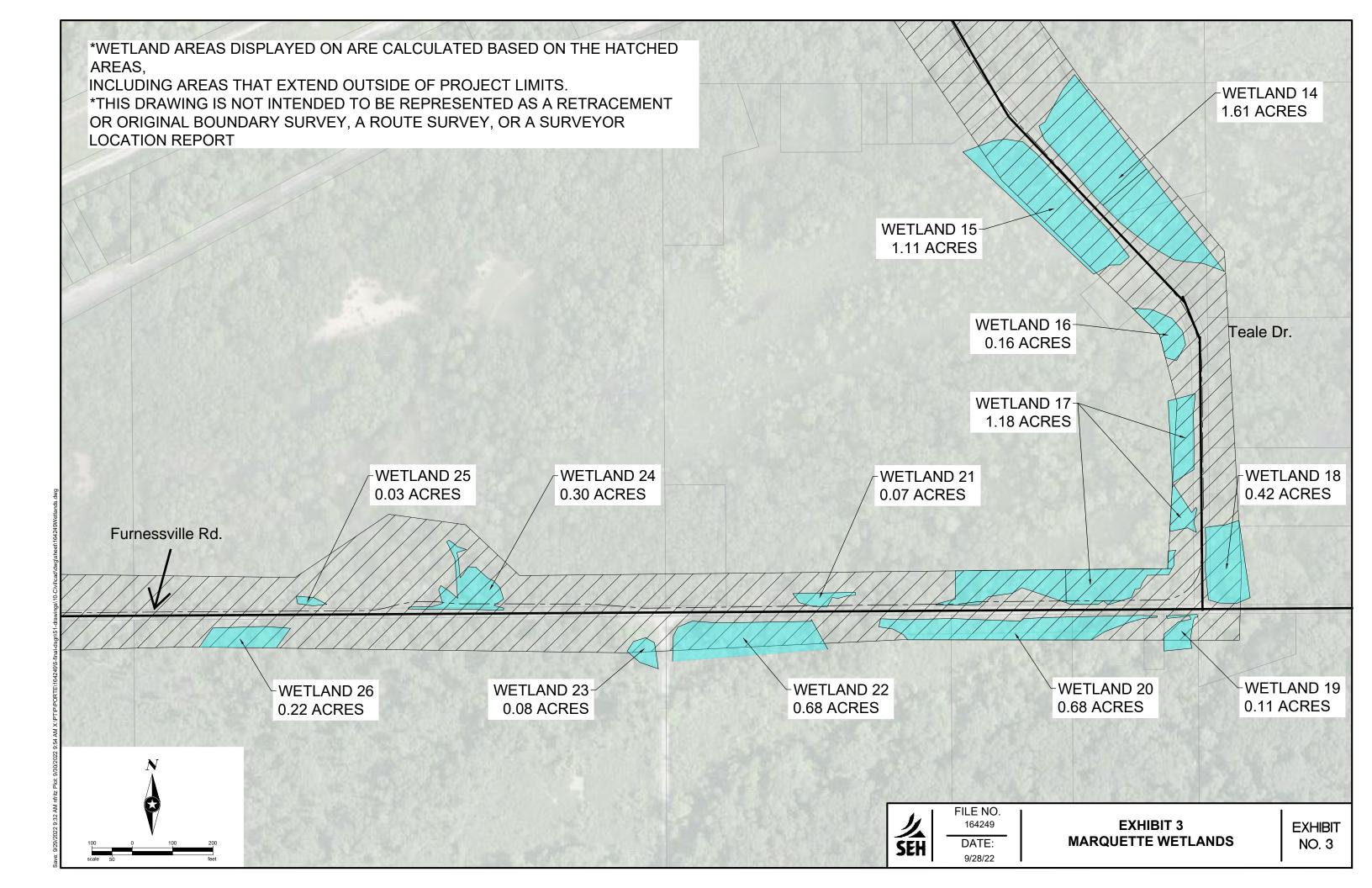
APPENDIX B WETLAND SURVEY

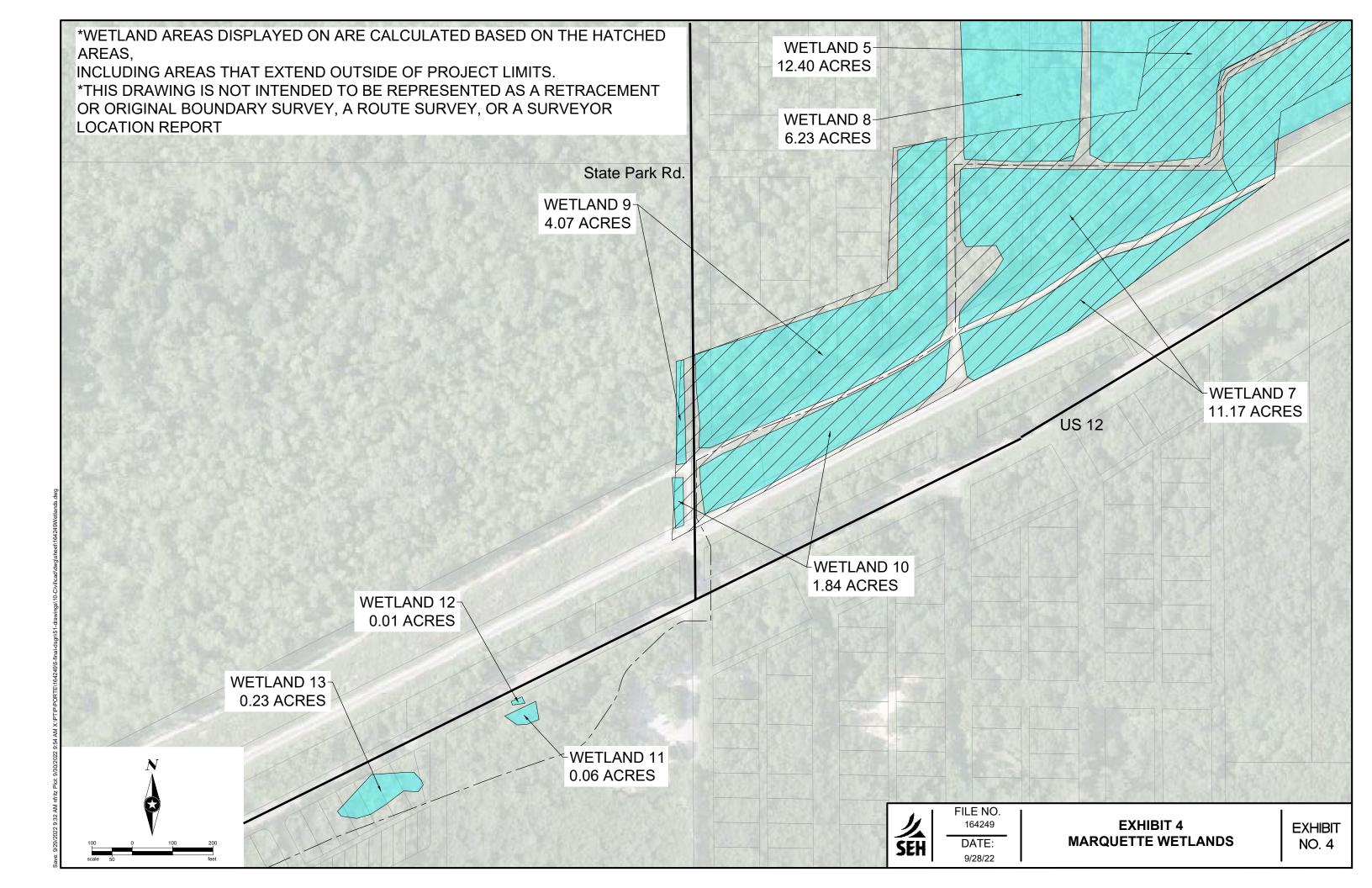
Soil Solutions, Inc.
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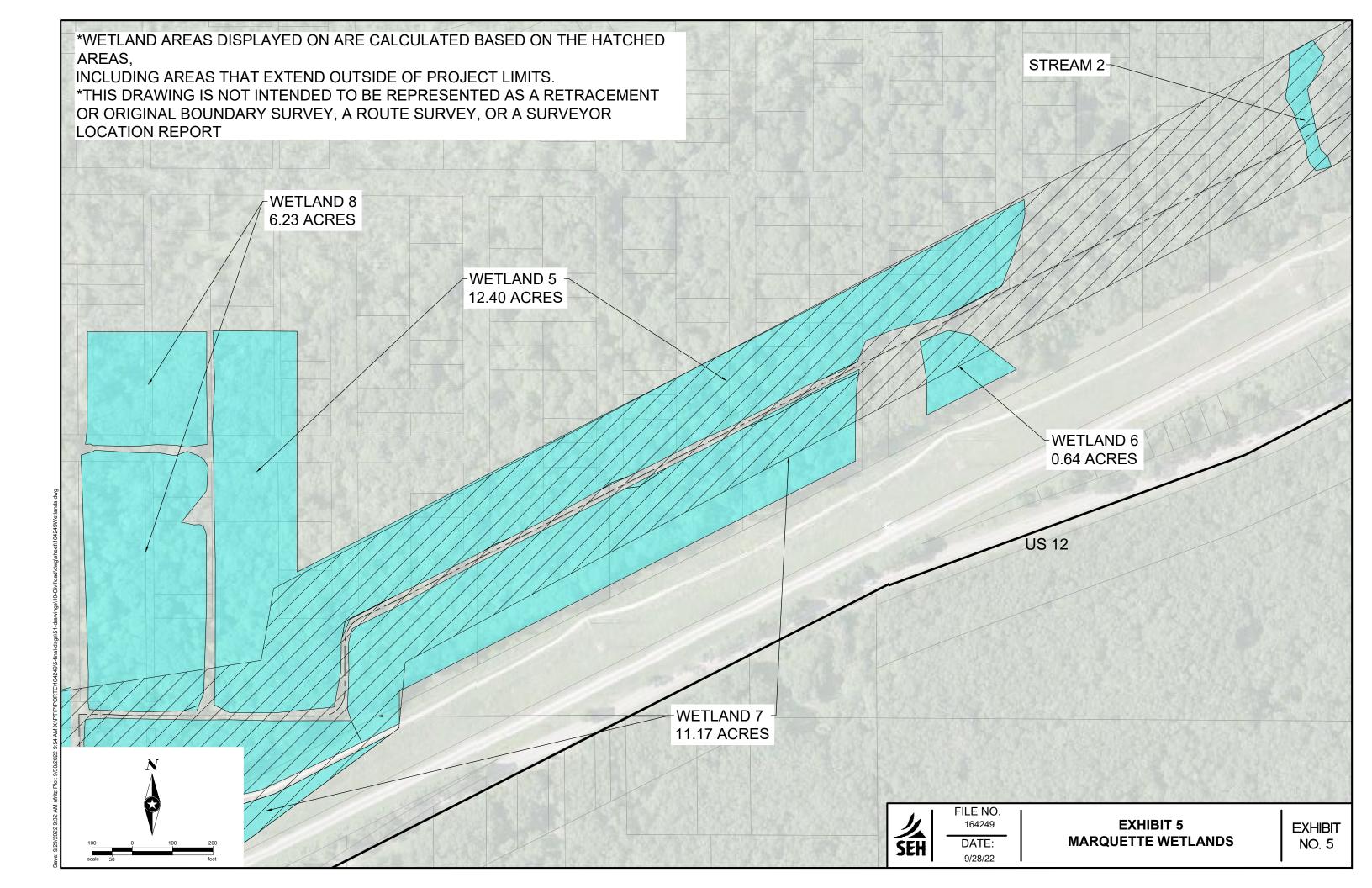


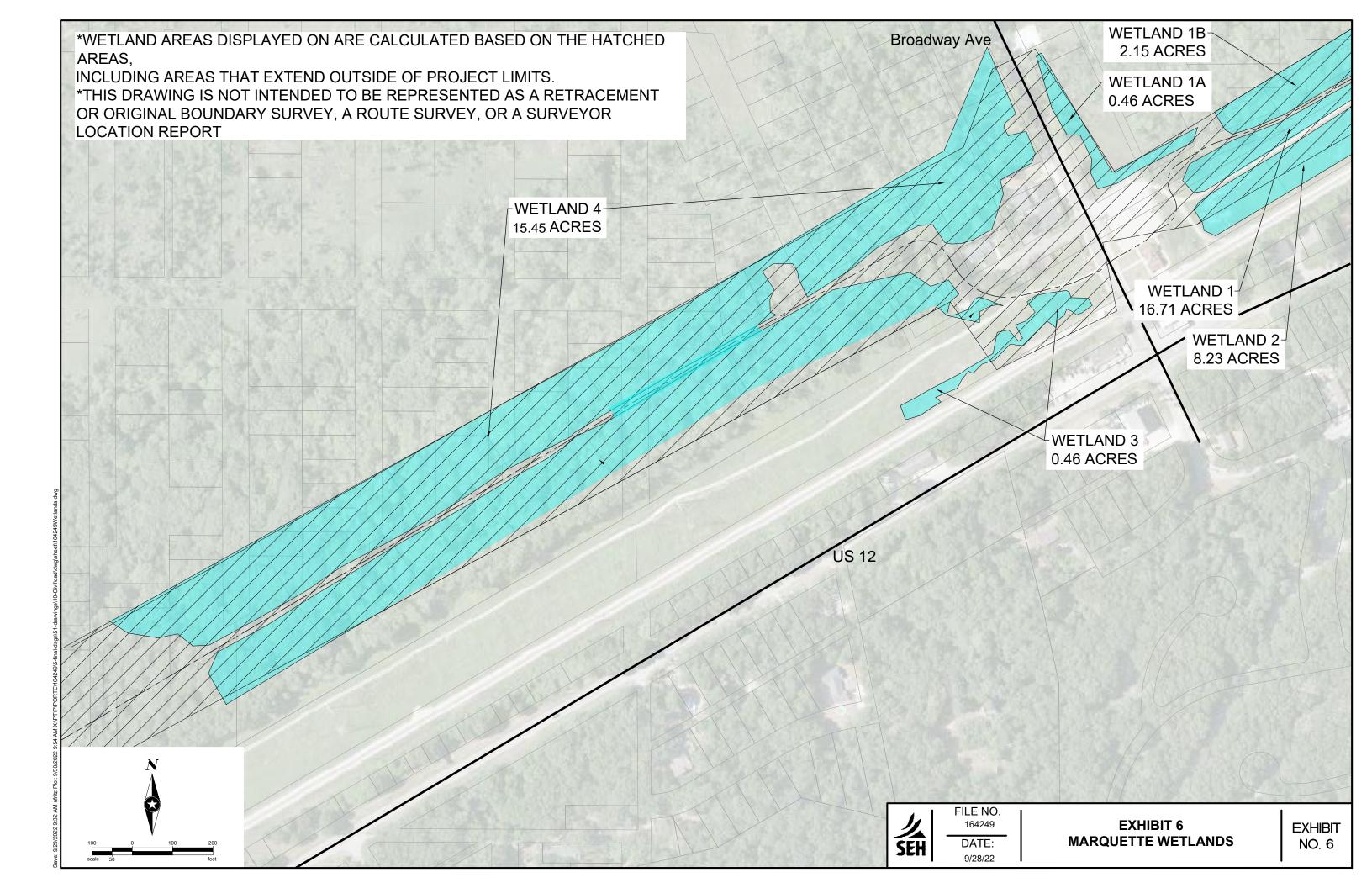


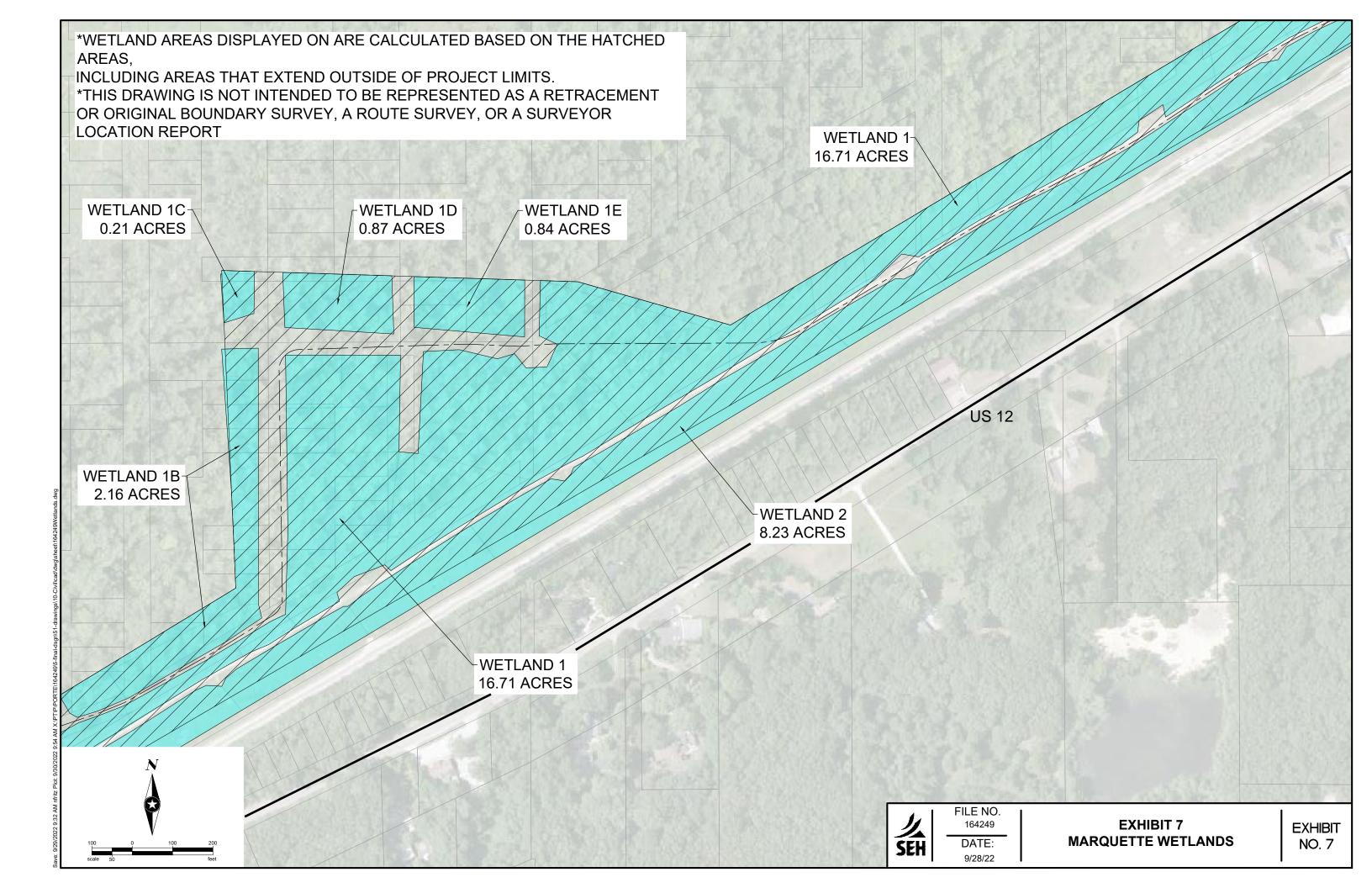


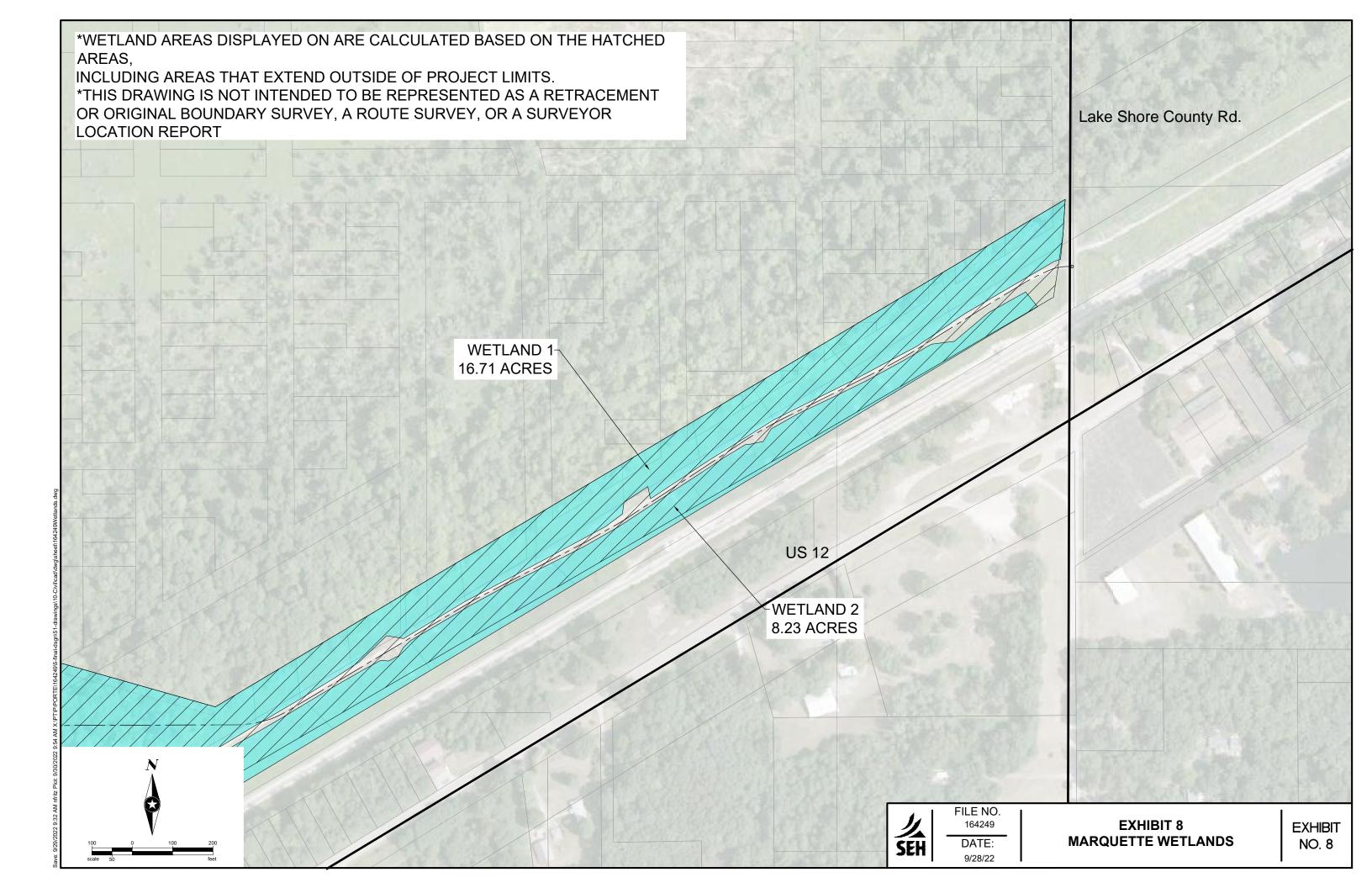












APPENDIX C USACE DATA FORMS

Soil Solutions, Inc. Page 35

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Marquette Greenway Trail / Furnessville Rd	City/County: Furnessville/ Porter County Sampling Date: 5/24/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P1
Investigator(s): K. Rogers, D. James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W
Landform (hillside, terrace, etc.): Lake plain Local relief (concave, convex, none): none Slope %: 0	
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651507	Long: -87.025886 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circumstances" present? Yesx _ 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 X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) This point is in a wetland on the north side of Furnesville Road, in an interdunal wetland. Much of the wetland is inundated while the edges are merely saturated.	
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) Water-Stained Leaves (_ ` ` ` ` ` ` `
x High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
x Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	• • • •
Drift Deposits (B3) Presence of Reduced In	<u> </u>
Algal Mat or Crust (B4)Recent Iron Reduction in	
Iron Deposits (B5)Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8) X_FAC-Neutral Test (D5)	
Field Observations:	
Surface Water Present? Yes No x Depth (inches):	
Water Table Present? Yes x No Depth (inches): Saturation Present? Yes x No Depth (inches):	
Saturation Present? Yes x No Depth (inches): (includes capillary fringe)	4 Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Domarko	
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	1
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:
. Acer saccharinum	15	Yes	FACW	Number of Dominant Species
Populus tremuloides	7	Yes	FAC	That Are OBL, FACW, or FAC:6 (A)
3.				Total Number of Dominant
i				Species Across All Strata: 7 (B)
5.				
3.		,		Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)
· ·				Prevalence Index worksheet:
	22	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)		,		OBL species 15 x 1 = 15
. Cornus racemosa	40	Yes	FAC	FACW species 75 x 2 = 150
2. Lindera benzoin	10	Yes	FACW	FAC species 84 x 3 = 252
3.				FACU species 41 x 4 = 164
··				UPL species 0 x 5 = 0
:				Column Totals: 215 (A) 581 (B)
				Prevalence Index = B/A = 2.70
·				Hydrophytic Vegetation Indicators:
·	50	=Total Cover		
Herb Stratum (Plot size: 10)		= I Olai Covei		1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
	40	Vaa	E 4 C \ A /	1
Onoclea sensibilis	40	Yes No	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Symplocarpus foetidus	15	No No	OBL	4 - Morphological Adaptations ¹ (Provide supportindata in Remarks or on a separate sheet)
B. Equisetum arvense	7	No No	FAC	
Dioscorea villosa	5	No No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Lilium michiganense</u>	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
S. Anemone quinquefolia	25	Yes	FACU	be present, unless disturbed or problematic.
7. Parthenocissus quinquefolia	7	<u>No</u>	FACU	Definitions of Vegetation Strata:
3. Fragaria virginiana	5	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in
6. Galium aparine	3	No	FACU	diameter at breast height (DBH), regardless of height.
0. Toxicodendron radicans	3	No	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
1. Rubus idaeus	3	No	FAC	and greater than or equal to 3.28 ft (1 m) tall.
2. Potentilla simplex	1	No	FACU	Herb – All herbaceous (non-woody) plants, regardles:
	125	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Noody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
. Vitis riparia	18	Yes	FAC	height.
2.				
3.				Hydrophytic Vegetation
				Present? Yes X No
l.				
·	18	=Total Cover		I

VEGETATION Continued – Ose scientific		•		Sampling Point: P1
Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
13				of size, and woody plants less than 3.28 ft tall.
14				Woody vines – All woody vines greater than 3.28 ft in
	22	=Total Cover		height.
Sapling/Shrub Stratum				
8				
9				
10				
11				
12				
13				
14				
	50	=Total Cover		
Herb Stratum			E4.0	
13. Arisaema triphyllum			<u>FAC</u>	
14				
15				
16.				
17				
18				
19				
20. 21.				
22.				
23.				
24.				
	125	=Total Cover		
Woody Vine Stratum	-	•		
5				
6.				
7.				
8.				
	18	=Total Cover		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)	-		1
·	·			

		o the de				tor or co	confirm the absence of indicators.)	
Depth	Matrix	0/		x Featur		1 2	Tautius	
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture Remarks	
0-12	10YR 2/1	100					Sandy	
12-20	10YR 5/1	100					Sandy	
	ncentration, D=Deple	etion, RM	=Reduced Matrix, N	/IS=Mas	ked Sand	l Grains.		
Hydric Soil I			Davida Occurrant	07\			Indicators for Problematic Hydric Soils ³ :	•
— Histosol ((A1) ipedon (A2)		Dark Surface (Polyvalue Belo		.co (S9) (I	DD D	2 cm Muck (A10) (LRR K, L, MLRA 149 E Coast Prairie Redox (A16) (LRR K, L, R)	′
Black His			MLRA 149B		ice (30) (i	LKK K,	5 cm Mucky Peat or Peat (S3) (LRR K, L	
	n Sulfide (A4)		Thin Dark Surf	,) (LRR R.	MLRA 1		
	Layers (A5)		— High Chroma S				Thin Dark Surface (S9) (LRR K, L)	,
x Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LR	R K, L)	Iron-Manganese Masses (F12) (LRR K, I	L, R)
x Thick Da	rk Surface (A12)		Loamy Gleyed	Matrix ((F2)		Piedmont Floodplain Soils (F19) (MLRA	149B)
	odic (A17)		Depleted Matri				Red Parent Material (F21) (outside MLR	A 145)
	A 144A, 145, 149B)		Redox Dark Su	-	-		Very Shallow Dark Surface (F22)	
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark Redox Depres				Other (Explain in Remarks)	
	edox (S5)		Marl (F10) (LR		0)		³ Indicators of hydrophytic vegetation and	
	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)	wetland hydrology must be present,	
<u> </u>	(- /			`	, (unless disturbed or problematic.	
Restrictive L	ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Present? Yes X No	
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Furnessville/ Porter County Sampling Date: 5/24/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P2
Investigator(s): K. Rodgers, D. James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W
	relief (concave, convex, none): convex
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651460	Long: -87.025963 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
<u> </u>	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	within a Wetland? YesNo_X_
Wetland Hydrology Present?	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
In a road prism, north of Furnessville road. South of P1, upland from wetla	and edge.
, ,	
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) Water-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inches):	
Water Table Present? Yes No x Depth (inches):	
Saturation Present? Yes No _x Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
6 1	
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet: FACU** 1. Sassafras albidum Yes Number of Dominant Species 2. Ulmus americana 15 Yes **FACW** That Are OBL, FACW, or FAC: 20 3 Tilia americana Yes **FACU** Total Number of Dominant 4. Species Across All Strata: 5 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 20.0% (A/B) Prevalence Index worksheet: 55 =Total Cover Total % Cover of: Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 15) FACW species 15 x 2 = 1. 30 2. FAC species 8 x 3 = 3. FACU species 183 x 4 = 732 5 4. UPL species x 5 = Column Totals: 211 (A) 811 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Poa pratensis **FACU** 3 - Prevalence Index is ≤3.0¹ 60 Yes **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Festuca arundinacea data in Remarks or on a separate sheet) 5 __ 3. Daucus carota No UPL 4. Viola sororia 7 No FAC Problematic Hydrophytic Vegetation¹ (Explain) Polygonatum biflorum 7 No **FACU** 5. ¹Indicators of hydric soil and wetland hydrology must 6. 1 **FACU** be present, unless disturbed or problematic. Taraxacum officinale No Trifolium repens **FACU Definitions of Vegetation Strata:** 7. No 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 156 =Total Cover of size, and woody plants less than 3.28 ft tall. 20) Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.) Road Prisim is in a 2x15

		the dep				tor or co	onfirm the absence of	indicators.)	
Depth	Matrix			x Featur		. 2	- .	5	
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Rem	arks
0-8	10YR 3/2	100					Sandy		
8-12	10YR 5/1	100					Sandy	gra	vel
¹ Type: C=Co	ncentration, D=Deple	tion RM	=Reduced Matrix N	 AS=Mas	ked Sand		² l ocation: Pl	=Pore Lining, M=M	Matrix
Hydric Soil I		tion, raw	Troduced Waters, II	no mas	ikou ourie	oranio.		Problematic Hyd	
Histosol (_	Dark Surface (S7)				k (A10) (LRR K, L ,	
Histic Epi	pedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (I	LRR R,	Coast Pra	irie Redox (A16) (I	RR K, L, R)
Black His	tic (A3)		MLRA 149B)			5 cm Muc	ky Peat or Peat (S	3) (LRR K, L, R)
	Sulfide (A4)	-	Thin Dark Surf					Below Surface (S8	
	Layers (A5)	-	High Chroma S					Surface (S9) (LRF	
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)		janese Masses (F1	
	rk Surface (A12)	-	Loamy Gleyed		(F2)				19) (MLRA 149B)
	odic (A17)	-	Depleted Matri		-0)				outside MLRA 145)
	A 144A, 145, 149B) ucky Mineral (S1)	-	Redox Dark Su Depleted Dark		•			low Dark Surface (plain in Remarks)	F22)
	eyed Matrix (S4)	-	Redox Depress				Other (EX	piaiii iii ixeiliaiks)	
Sandy Re		-	Marl (F10) (LR		0)		³ Indicators	s of hydrophytic ve	getation and
	Matrix (S6)	-	Red Parent Ma		21) (MLF	RA 145)		hydrology must be	
	. ,	-		`				disturbed or proble	
	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present	? Yes	NoX
Remarks:							-		
Hit a gravel fil	ll at 8 inches, data po	int isin ro	ad prism.						

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Furnessville / Porter County Sampling Date: 5/24/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P3
Investigator(s): K. Rogers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W
·	relief (concave, convex, none): concave Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651507	Long: -87.027628 Datum:
Soil Map Unit Name: Mn - Maumee loamy sandy	NWI classification: PF10C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	and and Oleman and Trail There is standing water just north of the data
This point is in a wetland on the north side of Furnessville Rd between the point, in a fern and lily dominated area.	road and Glennwood Trail. There is standing water just north of the data
point, in a formation my domination area.	
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)Water-Stained Leaves (B9) Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes x No Depth (inches):	
Saturation Present? Yes x No Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants.

ce Test worksheet:
Dominant Species
DBL, FACW, or FAC: 8 (A)
ber of Dominant
cross All Strata: 11 (B)
Dominant Species
DBL, FACW, or FAC: 72.7% (A/B)
e Index worksheet:
% Cover of: Multiply by:
es 7 x1= 7
ecies 87 x 2 = 174
es 70 x 3 = 210
cies 45 x 4 = 180
es 0 x 5 = 0
otals: 209 (A) 571 (B)
valence Index = B/A = 2.73
tic Vegetation Indicators:
pid Test for Hydrophytic Vegetation
minance Test is >50%
evalence Index is ≤3.0 ¹
rphological Adaptations ¹ (Provide supporting
a in Remarks or on a separate sheet)
matic Hydrophytic Vegetation ¹ (Explain)
of hydric soil and wetland hydrology must unless disturbed or problematic.
s of Vegetation Strata:
_
ody plants 3 in. (7.6 cm) or more in the treast height (DBH), regardless of height.
hrub – Woody plants less than 3 in. DBH er than or equal to 3.28 ft (1 m) tall.
herbaceous (non-woody) plants, regardless d woody plants less than 3.28 ft tall.
1 woody plants less than 3.20 it tall.
nes – All woody vines greater than 3.28 ft in
tic
n Vaa V
Yes <u>X</u> No
-

VEGETATION Continued – Use scientific	names of	plants.		Sampling Point: P3
	Absolute	Dominant	Indicator	
Tree Stratum	% Cover	Species?	Status	Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
13.				of size, and woody plants less than 3.28 ft tall.
14.				Woody vines – All woody vines greater than 3.28 ft in
		=Total Cover		height.
Sapling/Shrub Stratum		•		
8				
9.				
10.				
11				
12				
13				
14				
	40	=Total Cover		
Herb Stratum				
13				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21	-	·		
22				
23				
24				
	94	=Total Cover		
Woody Vine Stratum				
5				
6				
7.				
8.				
		=Total Cover		
Remarks: (Include photo numbers here or on a sepa	arate sheet)			
Tremains. (include prioto numbers here of on a sepa	ai ale Sileel.)			

Profile Desci	ription: (Describe to	the de	pth needed to doc	ument th	ne indica	ator or co	confirm the absence of indicators.)	
Depth	Matrix			x Featur	es			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	_
0-10	10YR 2/1	100					Mucky Sand	_
10-14	10YR 2/1	100					Sandy	_
14-20	10YR 2/1	90	10YR 4/4	10	c	<u>m</u>	Sandy Distinct redox concentrations	_
								_
								_
								_
								_
								_
								_
								_
¹ Type: C=Co	ncentration, D=Deple	tion. RN	/=Reduced Matrix. I	 MS=Masl	ked San	d Grains.	. ² Location: PL=Pore Lining, M=Matrix.	_
Hydric Soil II		,					Indicators for Problematic Hydric Soils ³ :	_
Histosol (Dark Surface ((S7)			2 cm Muck (A10) (LRR K, L, MLRA 149B)	
	pedon (A2)		Polyvalue Belo		ce (S8) (I RR R	Coast Prairie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B		00 (00) (5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
	Sulfide (A4)		Thin Dark Surf	•	(I RR R	MI RA		
	Layers (A5)		High Chroma		-		Thin Dark Surface (S9) (LRR K, L)	
	Below Dark Surface	(Δ11)	Loamy Mucky				Iron-Manganese Masses (F12) (LRR K, L, R)	1
	rk Surface (A12)	(/ () /)	Loamy Gleyed			it it, =/	Piedmont Floodplain Soils (F19) (MLRA 1498	
	odic (A17)		Depleted Matr		2)		Red Parent Material (F21) (outside MLRA 14	
	A 144A, 145, 149B)		Redox Dark S		6)		Very Shallow Dark Surface (F22)	٠,
	ucky Mineral (S1)		Depleted Dark	-	-		Other (Explain in Remarks)	
	eyed Matrix (S4)		Redox Depres				Offici (Explain in Normano)	
Sandy Re	• , ,		Marl (F10) (LR	-	3)		³ Indicators of hydrophytic vegetation and	
	Matrix (S6)		Red Parent Ma		21) (MI I	2Δ 1Δ5)	wetland hydrology must be present,	
ourpped	watrix (00)		Red Falche We	atchai (i	21) (IVILI	VA 140)	unless disturbed or problematic.	
	ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Present? Yes X No	
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P4
Investigator(s): K. Rodgers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W
<u> </u>	cal relief (concave, convex, none): convex
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651487	Long: -87.02763 Datum: NAD83
	NWI classification: PF10C
Soil Map Unit Name: Mn - Maumee loamy sandy	
Are climatic / hydrologic conditions on the site typical for this time of yea	
Are Vegetation, Soil, or Hydrology significantly dis	· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrology naturally proble	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This point in the road prism just south of the wetland and data point P3.	,
,	
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) Water-Stained Leave	es (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	lor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospher	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	on in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (0	C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	marks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
	es):
Surface Water Present? Yes No x Depth (inche Water Table Present? Yes No X Depth (inche	es):
Saturation Present? Yes No x Depth (inche	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P4

- O	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	50	Yes	FAC	Number of Dominant Species
2				That Are OBL, FACW, or FAC:3 (A)
3				Total Number of Dominant
4				Species Across All Strata: 3 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
	50	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)		•		OBL species 7 x 1 = 7
				FACW species 10 x 2 = 20
2.				FAC species 132 x 3 = 396
3				FACU species 25 x 4 = 100
4.				UPL species 0 x 5 = 0
·				· — —
5.				Column Totals: 174 (A) 523 (B)
6				Prevalence Index = B/A = 3.01
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:10)				X 2 - Dominance Test is >50%
Smilax tamnoides	40	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
2. Cornus racemosa	25	Yes	FAC	4 - Morphological Adaptations (Provide supporting
3. Parthenocissus quinquefolia	15	No	FACU	data in Remarks or on a separate sheet)
4. Lindera benzoin	10	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Osmunda spectabilis	7	No No	OBL	Indicators of hydric soil and wetland hydrology must
6. Clematis virginiana	3	No No	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Geranium maculatum	10	 No	FACU	Definitions of Vegetation Strata:
8. Arisaema triphyllum	3	No	FAC	
9. Geum canadense	3	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10. Carex blanda	5	No No	FAC	
11. Viola sororia	3	No No	FAC	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	<u> </u>		<u> </u>	and greater than or equal to 3.26 it (1 iii) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	124	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hydrophytic
3				Vegetation
4				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

	•	o the de	:			tor or co	confirm the absence of indicators.)	
Depth	Matrix			x Featur		. 2	T .	
(inches)	Color (moist)		Color (moist)		Type	Loc ²	Texture Remarks	
0-10	10YR 3/2	100					Sandy	
10-16	10YR 4/3	100					Sandy	
¹ Type: C=Co	ncentration, D=Deple	etion, RM	======================================	 √S=Mas	ked Sand	Grains.	. ² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I							Indicators for Problematic Hydric Soils ³ :	
Histosol (Dark Surface (2 cm Muck (A10) (LRR K, L, MLRA 149E	3)
	ipedon (A2)		Polyvalue Belo		ce (S8) (I	LRR R,	Coast Prairie Redox (A16) (LRR K, L, R)	_,
Black His	` '		MLRA 149B	,	\ /I DD D	MIDA	5 cm Mucky Peat or Peat (S3) (LRR K, L	
	n Sulfide (A4)		Thin Dark Surf					
	Layers (A5) Below Dark Surface	(A11)	Loamy Mucky	-			Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L	D/
	rk Surface (A12)	(A11)	Loamy Gleyed			X IX, L)	Piedmont Floodplain Soils (F19) (MLRA	
	odic (A17)		Depleted Matri		(1 <i>L)</i>		Red Parent Material (F21) (outside MLR	
	A 144A, 145, 149B)		Redox Dark Su		- 6)		Very Shallow Dark Surface (F22)	,
	ucky Mineral (S1)		Depleted Dark	-	-		Other (Explain in Remarks)	
	leyed Matrix (S4)		Redox Depres					
Sandy Re	edox (S5)		Marl (F10) (LR	R K, L)			³ Indicators of hydrophytic vegetation and	
Stripped	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)	wetland hydrology must be present,	
							unless disturbed or problematic.	
	.ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Present? Yes No _>	
Remarks:	16 inch depth, at road	d priom						
Gravei IIII at 1	ro inch depth, at road	ı prism.						

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail / Furnessville Rd	City/County: Furnessville / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P5				
Investigator(s): K. Rogers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
	elief (concave, convex, none): concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651515	Long: -87.030559 Datum: NAD83				
Soil Map Unit Name: OaC - Oakville fine sand	NWI classification: none				
•					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb					
Are Vegetation, Soil, or Hydrologynaturally problemat	tic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing samp	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.) This point is in a forested wetland on the north side of Furnessville Road. This point is in the roadside swale along Furnessville Road. The wetland continues off site to the north.					
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) Water-Stained Leaves (B	· · · · · · · · · · · · · · · · · · ·				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (C					
Sediment Deposits (B2) Oxidized Rhizospheres of Deduced Inc.	- · · · · —				
Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in					
Algal Mat or Crust (B4)Recent Iron Reduction in Thin Muck Surface (C7)	· / — · · · · · · · · · · · · · · · · ·				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	<u> </u>				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches): _					
Water Table Present? Yes x No Depth (inches):	4				
Water Table Present? Yes x No Depth (inches): Saturation Present? Yes x No Depth (inches):	0 Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	vious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P5 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** 4. Species Across All Strata: 5 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 80.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 10x30 **OBL** species x 1 = Yes **FACW** species 13 x 2 = Carya cordiformis 10 FAC 26 2. Cornus racemosa 25 Yes FAC FAC species 51 x 3 = 153 3. 15 **FACU** species x 4 = 60 4. **UPL** species 0 x 5 = 0 5. Column Totals: 79 (A) 239 3.03 6. Prevalence Index = B/A =

7				Hydrophytic Vegetation Indicators:
	35	_=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:10x30)				X 2 - Dominance Test is >50%
1. Quercus palustris	3	No	FACW	3 - Prevalence Index is ≤3.0 ¹
2. Symphyotrichum lateriflorum	5	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Parthenocissus quinquefolia	15	Yes	FACU	data in Remarks or on a separate sheet)
4. Solidago rugosa	3	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Impatiens capensis	2	No	FACW	¹Indicators of hydric soil and wetland hydrology must
6. Populus tremula	2	No	FAC	be present, unless disturbed or problematic.
7. Toxicodendron radicans	3	No	FAC	Definitions of Vegetation Strata:
8. Nyssa sylvatica	3	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Solidago gigantea	5	Yes	FACW	diameter at breast height (DBH), regardless of height.
10. Phalaris arundinacea	3	No	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	44	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)	_		Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic
4		_		Vegetation Present? Yes X No

=Total Cover

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

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument t	he indica	ator or co	onfirm the absence of indicators.)		
Depth	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture Remarks		
0-2	10YR 2/1	100					Mucky Sand		
2-6	10YR 2/1	100					Sandy		
6-14	10YR 4/2	100					Sandy		
				. <u></u>					
¹ Type: C=Co	ncentration, D=Deple	etion, RM	1=Reduced Matrix,	MS=Mas	ked San	d Grains.	² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil I							Indicators for Problematic Hydric Soils		
Histosol (Dark Surface				2 cm Muck (A10) (LRR K, L, MLRA 1		
	ipedon (A2)		Polyvalue Bel		ce (S8) (LRR R,	Coast Prairie Redox (A16) (LRR K, L,	-	
Black His	` '		MLRA 149E	,			5 cm Mucky Peat or Peat (S3) (LRR I		
	n Sulfide (A4)		Thin Dark Sur					(, L)	
	Layers (A5)		High Chroma				Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)	Iron-Manganese Masses (F12) (LRR		
	rk Surface (A12)		Loamy Gleyed		(F2)		Piedmont Floodplain Soils (F19) (MLF		
	oodic (A17)		Depleted Matr				Red Parent Material (F21) (outside M	ILRA 145)	
(MLR/	A 144A, 145, 149B)		Redox Dark S	-	-		Very Shallow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark	Surface	e (F7)		Other (Explain in Remarks)		
	leyed Matrix (S4)		Redox Depres	sions (F	8)		_		
Sandy Re	edox (S5)		Marl (F10) (LF	RR K, L)			³ Indicators of hydrophytic vegetation and		
Stripped	Matrix (S6)		Red Parent M	aterial (F	21) (MLF	RA 145)	wetland hydrology must be present,		
Restrictive L	_ayer (if observed):						unless disturbed or problematic.		
Type: _									
Depth (in	iches):						Hydric Soil Present? Yes X No		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P6					
Investigator(s): K. Rogers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W					
Landform (hillside, terrace, etc.): interdunal depression Local relief (concave, convex, none): concave Slope %: 0						
	·					
· , <u> </u>						
Soil Map Unit Name: OaC - Oakville fine sand	NWI classification: none					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes x No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.) this point is in silver maple dominated forested section of wetland on the north side of Furnessville rd						
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) Water-Stained Leaves (
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) — Oxidized Rhizospheres — Presence of Beduced In						
Drift Deposits (B3) Presence of Reduced Ir Algal Mat or Crust (B4) Recent Iron Reduction in						
Iron Deposits (B5) Iron Deposits (B5) Thin Muck Surface (C7)	• • • • • • • • • • • • • • • • • • • •					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No x Depth (inches):	:					
Water Table Present? Yes x No Depth (inches):						
Saturation Present? Yes x No Depth (inches):						
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point:

	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Acer saccharinum	30	Yes	FACW	Number of Dominant Species			
2. Nyssa sylvatica	45	Yes	FAC	That Are OBL, FACW, or FAC:5(A)			
3. Carya cordiformis	15	No	FAC	Total Number of Dominant			
4. Acer rubrum	10	No	FAC	Species Across All Strata: 6 (B)			
5.							
•				Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)			
<u> </u>				` ` /			
7				Prevalence Index worksheet:			
	100	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 10x30)				OBL species0 x 1 =0			
Populus tremuloides	10	Yes	<u>FAC</u>	FACW species 30 x 2 = 60			
2. Nyssa sylvatica	7	Yes	FAC	FAC species 90 x 3 = 270			
3				FACU species4 x 4 =16			
4				UPL species0 x 5 =0			
5.				Column Totals: 124 (A) 346 (B)			
6				Prevalence Index = B/A = 2.79			
7.				Hydrophytic Vegetation Indicators:			
7.	 17	=Total Cover					
Harb Charture (District 40:20		- Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10x30)				X 2 - Dominance Test is >50%			
Sassafras albidum	3	Yes	<u>FACU</u>	X 3 - Prevalence Index is ≤3.0 ¹			
2. Toxicodendron radicans	3	Yes	FAC	4 - Morphological Adaptations (Provide supporting			
3. Celastrus orbiculatus	1	No	FACU	data in Remarks or on a separate sheet)			
4				Problematic Hydrophytic Vegetation ¹ (Explain)			
5				¹ Indicators of hydric soil and wetland hydrology must			
6.				be present, unless disturbed or problematic.			
7.				Definitions of Vegetation Strata:			
0							
0				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
·				diameter at breast height (bbit), regardless of height.			
10.		· -		Sapling/shrub – Woody plants less than 3 in. DBH			
11		·		and greater than or equal to 3.28 ft (1 m) tall.			
12		· -		Herb – All herbaceous (non-woody) plants, regardless			
	7	=Total Cover		of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in			
1				height.			
2.							
3.		·		Hydrophytic Vegetation			
4.				Present? Yes X No			
		=Total Cover					
Demonstrate (Include whether muschaus have as as a second		- Total Cover					
Remarks: (Include photo numbers here or on a separ	ate sneet.)						

Profile Desc	ription: (Describe to	o the de	pth needed to doc	ument t	he indica	ator or co	confirm the absence of indicators.)		
Depth	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)		Type	Loc ²	Texture Remarks		
0-4	10YR 2/1	100					Mucky Sand		
4-8	10YR 2/1	100					Sandy		
8-12	10YR 4/2	100					Sandy		
12-18	10YR 4/4	100					Sandy		
								_	
								_	
1							2	_	
	ncentration, D=Deple	etion, RM	I=Reduced Matrix, N	์ ИS=Mas	ked Sand	d Grains.	·		
Hydric Soil I			? Dark Surface ((S7)			Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B)		
	ipedon (A2)		Polyvalue Belo		ce (S8) (LRR R.	Coast Prairie Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B		, , ,	,	5 cm Mucky Peat or Peat (S3) (LRR K, L, R	?)	
Hydroger	n Sulfide (A4)		Thin Dark Surf	ace (S9	(LRR R	, MLRA 1		,	
Stratified	Layers (A5)		High Chroma S	-			? Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LR I	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, F		
	rk Surface (A12)		Loamy Gleyed		F2)		Piedmont Floodplain Soils (F19) (MLRA 149		
	odic (A17)		Depleted Matri				Red Parent Material (F21) (outside MLRA 1	145)	
	A 144A, 145, 149B)		Redox Dark St	-	-		Very Shallow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark				Other (Explain in Remarks)		
	leyed Matrix (S4) edox (S5)		Redox Depres Marl (F10) (LR		0)		³ Indicators of hydrophytic vegetation and		
	Matrix (S6)		Red Parent Ma		:21) (MI E	PA 145)	wetland hydrology must be present,		
ompped	Wattix (50)		Ned Falentina	ateriai (i	21) (IVILI	\A 140)	unless disturbed or problematic.		
Restrictive L Type:	.ayer (if observed):								
Depth (in	ches):						Hydric Soil Present? Yes X No		
Remarks:	, <u></u>							•	

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P7				
Investigator(s): K. Rogers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
	relief (concave, convex, none): concave Slope %: 3				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.6518134	Long: -87.0305207 Datum: NAD83				
Soil Map Unit Name: Bta - Brems sand	NWI classification: none				
·					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb	<u></u>				
Are Vegetation, Soil, or Hydrology naturally problema	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.				
Lludraphutia Vagatatian Drasant? Vas No Y	Is the Sampled Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	within a Wetland? YesNo_X_				
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
This point is in upland forest, just north of wetland. In a black cherry and sa	assafras dominated area.				
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
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) Water-Stained Leaves (E					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	· / · · · · · · · · · · · · · · · · · ·				
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Recent Iron Reduction in	· /				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	· · · · · · ·				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes x No Depth (inches):					
Saturation Present? Yes No x Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
3 3 / 3 / 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: Absolute Dominant Indicator Tree Stratum (Plot size: % Cover Species? Status **Dominance Test worksheet: FACU** 1. Prunus serotina Yes Number of Dominant Species 2. Sassafras albidum 35 Yes **FACU** That Are OBL, FACW, or FAC: (A) 20 3. Quercus rubra Yes **FACU** Total Number of Dominant 4. Species Across All Strata: 5 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: 85 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 0 x 2 = 1. Sassafras albidum Yes **FACU** 0 2. FAC species 0 x 3 = 3. FACU species 210 x 4 = 840 4. UPL species x 5 = 5. Column Totals: 210 (A) 840 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 80 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Sassafras albidum **FACU** 3 - Prevalence Index is ≤3.0¹ Quercus rubra **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 No data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 45 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descript	ion: (Describe to	the dep	th needed to docu	ıment th	ne indica	tor or co	confirm the absence of indicators.)
Depth	Matrix		Redox	k Feature	es		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-12	10YR 3/1	100					Sandy
12-20	10YR 4/2	100					Sandy
	_						
		tion, RM=	Reduced Matrix, M	1S=Masl	ked Sand	l Grains.	
Hydric Soil India							Indicators for Problematic Hydric Soils ³ :
Histosol (A1))	_	Dark Surface (-			2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epiped	don (A2)	_	Polyvalue Belo	w Surfac	ce (S8) (I	RR R,	Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic	(A3)		MLRA 149B)			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Su	ulfide (A4)	_	Thin Dark Surfa	ace (S9)	(LRR R,	MLRA 1	149B) Polyvalue Below Surface (S8) (LRR K, L)
Stratified Lay	yers (A5)		High Chroma S	ands (S	11) (LRF	R K, L)	Thin Dark Surface (S9) (LRR K, L)
Depleted Bel	low Dark Surface ((A11)	Loamy Mucky I	Mineral ((F1) (LRF	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)
Thick Dark S	Surface (A12)		Loamy Gleyed	Matrix (I	F2)		Piedmont Floodplain Soils (F19) (MLRA 149B
Mesic Spodio		_	Depleted Matrix		•		Red Parent Material (F21) (outside MLRA 145
	14A, 145, 149B)	_	Redox Dark Su		6)		Very Shallow Dark Surface (F22)
	y Mineral (S1)	_	— Depleted Dark	-	-		Other (Explain in Remarks)
	ed Matrix (S4)	_	Redox Depress				
Sandy Redox		-	 Marl (F10) (LR		,		³ Indicators of hydrophytic vegetation and
Stripped Mat		-	Red Parent Ma		21) (MI F	2Δ 145)	wetland hydrology must be present,
outped wat	anx (00)	-		itoriai (i i	21) (IVI 2 11	UA 140)	unless disturbed or problematic.
Restrictive Laye	er (if observed):						
Type:							
Depth (inche	es):						Hydric Soil Present? Yes No _X
Remarks:							

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P8				
Investigator(s): K. Rogers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
· · · · · · · · · · · · · · · · · · ·	relief (concave, convex, none): Concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.6514392	Long: -87.0319952 Datum: NAD83				
Soil Map Unit Name: OcA - Oakville fine sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?					
Are Vegetation, Soil, or Hydrology significantly disturb					
Are Vegetation, Soil, or Hydrologynaturally problema					
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	,				
This point is in sparsely vegetated forested wetland area north of Furnessv	ville Rd. Dominated by silver maple.				
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) Water-Stained Leaves (I	` `				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
X Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of					
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4)Recent Iron Reduction in	in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	rks) Microtopographic Relief (D4)				
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No x Depth (inches):	Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
Remarks.					

VEGETATION – Use scientific names of plants. Sampling Point: P8 Absolute Indicator Dominant Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Acer saccharinum 30 Yes **FACW Number of Dominant Species** 2. FACW Quercus palustris 30 Yes That Are OBL, FACW, or FAC: 3. Nyssa sylvatica 30 Yes FAC Total Number of Dominant 4. Species Across All Strata: 7 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 85.7% (A/B) Prevalence Index worksheet: 90 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: OBL species 0

1. <u>/</u>	Fraxinus pennsylvanica	5	Yes	FACW	FACW species 71 x 2 = 142
2					FAC species38 x 3 =114
3			_		FACU species 8 x 4 = 32
4					UPL species0 x 5 =0
5			_		Column Totals: 117 (A) 288 (B)
6.			_		Prevalence Index = B/A = 2.46
7					Hydrophytic Vegetation Indicators:
	_	5	_=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb	Stratum (Plot size:10)				X 2 - Dominance Test is >50%
1. <u>/</u>	Nyssa sylvatica	5	Yes	FAC	X 3 - Prevalence Index is ≤3.0 ¹
2.	Vaccinium angustifolium	3	No	FACU	4 - Morphological Adaptations ¹ (Provide supporting
3.	Spiraea tomentosa	5	Yes	FACW	data in Remarks or on a separate sheet)
4.	Solidago rugosa	3	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>I</u>	llex verticillata	1	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
6. <u>/</u>	Parthenocissus quinquefolia	5	Yes	FACU	be present, unless disturbed or problematic.
7			_		Definitions of Vegetation Strata:
8			_		Tree – Woody plants 3 in. (7.6 cm) or more in
9.					diameter at breast height (DBH), regardless of height.
10					Sapling/shrub – Woody plants less than 3 in. DBH
11					and greater than or equal to 3.28 ft (1 m) tall.
12					Herb – All herbaceous (non-woody) plants, regardless
	_	22	_=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woo	dy Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1			_		height.
2					The described to
3					Hydrophytic Vegetation
4.			_		Present? Yes X No No
			_=Total Cover		

Profile Desci	ription: (Describe to	the de	pth needed to doc	ument tl	ne indica	ator or co	onfirm the absence of indicators.	.)		
Depth	Matrix			x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-2	10YR 3/1	100					Sandy	_		
2-12	10YR 4/2	90	10YR 4/4	10	c	<u>m</u>	Sandy Distinct	redox concentrations		
12-20	10YR 5/4	100								
	_									
¹ Type: C=Co	ncentration, D=Deple	—— tion, RM	======================================	 MS=Masl	ked Sand	Grains.	² Location: PL=Pore Linin	g, M=Matrix.		
Hydric Soil II		-	·				Indicators for Problema			
Histosol (Dark Surface ((S7)				RR K, L, MLRA 149B)		
	pedon (A2)		Polyvalue Beld		ce (S8) (LRR R,	Coast Prairie Redox			
Black His			MLRA 149E		(- / (,		Peat (S3) (LRR K, L, R)		
	Sulfide (A4)		Thin Dark Sur	•	(LRR R	, MLRA 1				
	Layers (A5)		High Chroma		-		Thin Dark Surface (S			
	Below Dark Surface	(A11)	Loamy Mucky				Iron-Manganese Masses (F12) (LRR K, L, R)			
	rk Surface (A12)	,	Loamy Gleyed			, ,	Piedmont Floodplain Soils (F19) (MLRA 149B)			
	odic (A17)		Depleted Matr	-	,		Red Parent Material (F21) (outside MLRA 145			
	A 144A, 145, 149B)		Redox Dark S		6)		Very Shallow Dark Surface (F22)			
	ucky Mineral (S1)		Depleted Dark	-	-		Other (Explain in Ren			
	eyed Matrix (S4)		Redox Depres				` ` .	,		
X Sandy Re			Marl (F10) (LF	-	,		³ Indicators of hydrophytic vegetation and			
	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)	wetland hydrology must be present,			
				,	, ,		unless disturbed or problematic.			
Restrictive L Type:	ayer (if observed):									
Depth (in	chos):						Hydric Soil Present?	res X No		
							nyunc son Fresent?	/esX No		
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P9				
Investigator(s): K. Rogers, D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
·	relief (concave, convex, none): Concave Slope %: 5				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.6514998					
Soil Map Unit Name: OcA - Oakville fine sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes x No				
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area				
Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
	ii yes, optional wetiand one ib.				
Remarks: (Explain alternative procedures here or in a separate report.) In upland forest east of wetland. Dominated by sassafras and oaks.					
The appared to the country of the co					
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) Water-Stained Leaves (B	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (· /				
Sediment Deposits (B2) Oxidized Rhizospheres o					
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Thin Muck Surface (C7)	• • • • • • • • • • • • • • • • • • • •				
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remark					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:	TAG-Neutral Test (BS)				
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No x Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P9 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** 1. Quercus velutina 50 Yes UPL Number of Dominant Species 25 2. FACU Quercus rubra Yes That Are OBL, FACW, or FAC: FACW Quercus palustris 15 Nο

4.	10		<u> </u>	Total Number of Dominant Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 20.0% (A/B)
7				Prevalence Index worksheet:
-	90	_=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species0 x 1 =0
Sassafras albidum	25	Yes	FACU	FACW species 35 x 2 = 70
2				FAC species0 x 3 =0
3				FACU species 90 x 4 = 360
4				UPL species 50 x 5 = 250
5				Column Totals: 175 (A) 680 (B)
6				Prevalence Index = B/A = 3.89
7				Hydrophytic Vegetation Indicators:
_	25	_=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:10)				2 - Dominance Test is >50%
1. Sassafras albidum	7	No	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Vaccinium angustifolium	25	Yes	FACU	4 - Morphological Adaptations (Provide supporting
3. Rubus hispidus	15	Yes	FACW	data in Remarks or on a separate sheet)
4. Pteridium aquilinum	5	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Fraxinus pennsylvanica	5	No	FACW	Indicators of hydric soil and watland hydrology must
6. Parthenocissus quinquefolia	3	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	60	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)		_		Woody vines – All woody vines greater than 3.28 ft in
1				height.
2.				Undrophytic
3.				Hydrophytic Vegetation
4.		_		Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separa	ate sheet.	_		_L

Profile Desc	ription: (Describe t	o the de				ator or co	confirm the absence of indicators.)
Depth	Matrix			x Featur			
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture Remarks
0-2	10YR 2/2	100					Sandy
2-12	10YR 3/2	100					Sandy
12-20	10YR 5/4	100					Sandy
1Type: C=Ce	ncentration, D=Deple						21 costion: DI = Poro Lining M=Motrix
Hydric Soil I		elion, Riv	i=Reduced Matrix, i	ws=was	sked Sand	Grains.	. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (Dark Surface	(S7)			2 cm Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,	Coast Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3)		MLRA 149E	3)			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Thin Dark Sur	face (S9) (LRR R	, MLRA 1	149B) Polyvalue Below Surface (S8) (LRR K, L)
	Layers (A5)		High Chroma				Thin Dark Surface (S9) (LRR K, L)
Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L)				R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)		
Thick Dark Surface (A12) Loamy Gleyed Matrix (F2)					Piedmont Floodplain Soils (F19) (MLRA 149B)		
	odic (A17)		Depleted Matr				Red Parent Material (F21) (outside MLRA 14
(MLRA 144A, 145, 149B) Redox Dark Surface (F6)					Very Shallow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark				Other (Explain in Remarks)
	leyed Matrix (S4)		Redox Depres	-	8)		3
	edox (S5)		Marl (F10) (LF				³ Indicators of hydrophytic vegetation and
Stripped	Matrix (S6)		Red Parent M	aterial (F	² 21) (MLF	RA 145)	wetland hydrology must be present, unless disturbed or problematic.
	ayer (if observed):						anissa sistematic
Type:							
Depth (in	ches):						Hydric Soil Present? Yes No _X
Remarks:							

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022			
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P10			
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W			
	relief (concave, convex, none): Concave Slope %:			
· —————				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651370	Long: <u>-87.0312511</u> Datum: <u>NAD83</u>			
Soil Map Unit Name: BtA - Brems sands	NWI classification: none			
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrologysignificantly distur	bed? Are "Normal Circumstances" present? Yes x No			
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area			
Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:			
Remarks: (Explain alternative procedures here or in a separate report.)	ii yes, optional wetiand one ib.			
This point is in a roadside ditch along Furnessville Road. Some hydrophyti	c vegetation but does not qualify as wetland.			
This point is in a roadside ditori diorig i amoseville read. Some nyaropnya	o regetation but does not qualify as restand.			
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of the control of th				
Drift Deposits (B3) Presence of Reduced In				
Algal Mat or Crust (B4) Recent Iron Reduction in This Music Surface (C7)				
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)			
	TAG-Neutral Test (50)			
Field Observations: Surface Water Present? Yes No _x Depth (inches):				
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches):				
Saturation Present? Yes No x Depth (inches):				
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:			
Remarks:				
No free water to 20 inches. Other wetlands in the area had free water.				

VEGETATION – Use scientific names of plants. Sampling Point: P10 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3 (A) 3. Total Number of Dominant 4. Species Across All Strata: 4 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 75.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 12 x 2 = 1. Yes FAC 24 Cornus racemosa 2. llex verticillata Yes **FACW** FAC species 40 x 3 = 5 17 3. Salix discolor No **FACW** FACU species x 4 = 4. UPL species x 5 = 5. Column Totals: 69 (A) 212 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 27 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: X 2 - Dominance Test is >50% Toxicodendron radicans FAC 3 - Prevalence Index is ≤3.0¹ 5 No FAC 4 - Morphological Adaptations¹ (Provide supporting 2 Apocynum cannabinum data in Remarks or on a separate sheet) 3. Parthenocissus quinquefolia No **FACU** 10 4. Vitis labrusca Yes **FACU** Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 42 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descripe	ription: (Describe to Matrix	o the de		ument tl		ator or co	onfirm the absence of i	ndicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 2/1	100					Sandy	
2-12	10YR 4/3	80	10YR 3/1	20	С	M	Sandy	Distinct redox concentrations
12-20	10YR 5/4	100					Sandy	
-								
-								
¹Type: C=Co	ncentration, D=Deple	etion, RN	 Л=Reduced Matrix, №	 иS=Mas	ked Sand	Grains.	² Location: PL=	Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Problematic Hydric Soils ³ :
Histosol (Dark Surface ((00) ((A10) (LRR K, L, MLRA 149B)
— Histic Epi Black His	ipedon (A2)		MLRA 149B	clow Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R)			rie Redox (A16) (LRR K, L, R) ky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)			,	(LRR R	. MLRA 1		Below Surface (S8) (LRR K, L)
Hydrogen Sulfide (A4) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S6) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)								
Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L)				R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)			
Thick Dark Surface (A12) Loamy Gleyed Matrix (F2)					Piedmont Floodplain Soils (F19) (MLRA 149B)			
Mesic Spodic (A17) Depleted Matrix (F3)						t Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)						ow Dark Surface (F22)	
	ucky Mineral (S1) leyed Matrix (S4)					Other (Exp	olain in Remarks)	
X Sandy Re			Marl (F10) (LR	•	0)		³ Indicators	of hydrophytic vegetation and
	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)		hydrology must be present,
Toda' a delic Mational (121) (M210			,		isturbed or problematic.			
	ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Present	? Yes X No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P11				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
• • • •	relief (concave, convex, none): Concave Slope %: 1				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.650622	Long: -87.0317903 Datum: NAD83				
Soil Map Unit Name: OcA - Oakville fine sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?					
	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb					
Are Vegetation, Soil, or Hydrologynaturally problema	ttic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_				
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
This point is in upland dune forest along the trail route on the east side of H	Hadenfelt Road.				
Asian bittersweet has severly degraded this forest.					
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) Water-Stained Leaves (E					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of					
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	ks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No x Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

VEGETATION – Use scientific names of plants.

VEGETATION – Use scientific names of place	ants.			Sampling Point: P11			
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
Quercus rubra	90	Yes	FACU	Number of Dominant Species			
2. Sassafras albidum	75	Yes	FACU	That Are OBL, FACW, or FAC:1 (A)			
3.				Total Number of Dominant			
4.	<u>-</u>			Species Across All Strata: 7 (B)			
5.				Percent of Dominant Species			
6.				That Are OBL, FACW, or FAC: 14.3% (A/B)			
7.				Prevalence Index worksheet:			
		=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size:)		•		OBL species 0 x 1 = 0			
1. Hamamelis virginiana	5	No	FACU	FACW species 0 x 2 = 0			
2. Sassafras albidum	30	Yes	FACU	FAC species 25 x 3 = 75			
3. Tilia americana	5	No	FACU	FACU species 335 x 4 = 1340			
4. Prunus virginiana	10	No	FACU	UPL species 17 x 5 = 85			
5. Rosa multiflora	15	Yes	FACU	Column Totals: 377 (A) 1500 (B)			
6. Cornus florida	7	No	FACU	Prevalence Index = B/A = 3.98			
7. Elaeagnus umbellata	7	No	UPL	Hydrophytic Vegetation Indicators:			
	79	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		1		2 - Dominance Test is >50%			
1. Toxicodendron radicans	20	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹			
Maianthemum racemosum	7	No	FACU	4 - Morphological Adaptations ¹ (Provide supporting			
Carex pensylvanica	10	Yes	UPL	data in Remarks or on a separate sheet)			
Symphyotrichum lateriflorum	5	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)			
5. Alliaria petiolata	5	No	FACU	<u> </u>			
6. Elymus canadensis	3	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7. Parthenocissus quinquefolia	5	No	FACU	Definitions of Vegetation Strata:			
Galium aparine	3	No No	FACU				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
10.							
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
12.							
12.	58	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size: 20)		10161 00.5.					
Celastrus orbiculatus	75	Yes	FACU	Woody vines – All woody vines greater than 3.28 ft in height.			
2.				Trongs.			
3				Hydrophytic			
4.				Vegetation Present? Yes No X			
··	 75	=Total Cover					
Remarks: (Include photo numbers here or on a sepa		-					
Remarks. (include prioto numbers here of on a sope	Male Sileel.						

VEGETATION Continued – Use scientific names of plants. Sampling Point: P11 Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. _____ and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 165 =Total Cover Sapling/Shrub Stratum 9. ____ 79 =Total Cover Herb Stratum 21. _____ 58 =Total Cover Woody Vine Stratum 7. 75 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descr	iption: (Describe to	the dep				tor or co	onfirm the absence of indica	tors.)
Depth	Matrix			x Featur				
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/2	100					Sandy	Gravel
5-10	10YR 4/3	90	10YR 5/6				Sandy	
			10YR 3/1	3				
10-16	10YR 3/3	100					Sandy	
¹ Type: C=Coi	ncentration, D=Deple	tion, RM=	Reduced Matrix, N	—— //S=Mas	ked Sand	Grains.	² Location: PL=Pore	Lining, M=Matrix.
Hydric Soil Ir	ndicators:						Indicators for Probl	ematic Hydric Soils ³ :
Histosol (A1)	_	Dark Surface (S7)			2 cm Muck (A10)) (LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (l	LRR R,	Coast Prairie Re	dox (A16) (LRR K, L, R)
Black His	tic (A3)	_	MLRA 149B)			5 cm Mucky Pea	t or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Thin Dark Surf	ace (S9)	(LRR R	, MLRA 1	I49B) Polyvalue Below	Surface (S8) (LRR K, L)
Stratified	Layers (A5)		— High Chroma S	Sands (S	311) (LRI	R K, L)	Thin Dark Surfac	e (S9) (LRR K, L)
Depleted	Below Dark Surface	(A11) -	Loamy Mucky	Mineral	(F1) (LR I	R K, L)	Iron-Manganese	Masses (F12) (LRR K, L, R)
	k Surface (A12)	` _	Loamy Gleyed			,		olain Soils (F19) (MLRA 149B)
Mesic Spo	odic (A17)	_	Depleted Matri		•			erial (F21) (outside MLRA 145)
	144A, 145, 149B)	_	Redox Dark Su		·6)		Very Shallow Da	
Sandy Mucky Mineral (S1) Dep			Depleted Dark				Other (Explain in	
	eyed Matrix (S4)	-	Redox Depress				` ` '	,
Sandy Re		_	 Marl (F10) (LR		,		³ Indicators of hyd	drophytic vegetation and
	Matrix (S6)	-	Red Parent Ma		21) (MLF	RA 145)		ogy must be present,
		_		•				ed or problematic.
Restrictive La	ayer (if observed):							
Depth (inc	ches):						Hydric Soil Present?	Yes No _X_
Remarks:	<u> </u>							

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022			
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P12			
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W			
·	relief (concave, convex, none): Concave Slope %: 0			
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651135	Long: -87.032507 Datum: NAD83			
Soil Map Unit Name: BtA - Brems sand	NWI classification: none			
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)			
Are Vegetation , Soil , or Hydrology significantly disturb				
Are Vegetation, Soil, or Hydrology naturally problema				
SUMMARY OF FINDINGS – Attach site map showing sam				
·				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area			
Hydric Soil Present? Yes X No	within a Wetland? Yes X No			
Wetland Hydrology Present? Yes X No No	If yes, optional Wetland Site ID:			
Remarks: (Explain alternative procedures here or in a separate report.)	r now than it likely was in the neet but everall high guality wetland			
Interdunal depression on the southside of Furnessville, this wetland is drier	r now than it likely was in the past but overall high quality wetland.			
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) Water-Stained Leaves (B	B9) Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	rks)Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? Yes No _x Depth (inches):				
Water Table Present? Yes No X Depth (inches):				
Saturation Present? Yes No x Depth (inches):				
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:			
Remarks:				

VEGETATION – Use scientific names of plants.

	nts.	Dominont	India-+	Sampling Point: P12
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
I. Nyssa sylvatica	75	Yes	FAC	Number of Dominant Species
2. Quercus palustris	20	Yes	FACW	That Are OBL, FACW, or FAC:10 (A)
i				Total Number of Dominant
i				Species Across All Strata: 11 (B)
5.				Percent of Dominant Species
)				That Are OBL, FACW, or FAC: 90.9% (A/B
·.				Prevalence Index worksheet:
	95	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)		-		OBL species 7 x 1 = 7
Populus tremuloides	7	Yes	FAC	FACW species 61 x 2 = 122
2. Lindera benzoin	 15	Yes	FACW	FAC species 104 x 3 = 312
3. Ilex verticillata	7	Yes	FACW	FACU species 12 x 4 = 48
. Quercus palustris	7	Yes	FACW	UPL species 0 x 5 = 0
5. Sassafras albidum		Yes	FACU	Column Totals: 184 (A) 489 (B
5.				Prevalence Index = B/A = 2.66
··				Hydrophytic Vegetation Indicators:
	43	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		-		X 2 - Dominance Test is >50%
. Toxicodendron radicans	5	No	FAC	X 3 - Prevalence Index is ≤3.0 ¹
2. Smilax rotundifolia		Yes	FAC	4 - Morphological Adaptations ¹ (Provide supportin
3. Symphyotrichum lateriflorum	3	No	FAC	data in Remarks or on a separate sheet)
Carex annectens	 7	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Sassafras albidum		No	FACU	-
6. Osmunda spectabilis	 7	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Thelypteris palustris		No	FACW	Definitions of Vegetation Strata:
3.			TACW	
). 				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.		- '		Herb – All herbaceous (non-woody) plants, regardles:
	39	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Noody Vine Stratum (Plot size: 20)		-		Woody vines – All woody vines greater than 3.28 ft in
1. Vitis riparia	7	Yes	FAC	height.
2.				
3.				Hydrophytic Vegetation
				Present? Yes X No
1.		=Total Cover		
4		T-4-1 0		

Profile Desc Depth	ription: (Describe to Matrix	o the de	•	ument tl x Featur		ator or co	onfirm the absence of	indicators.)	
(inches)	Color (moist)	%	Color (moist)	_ %	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 2/1	100					Sandy	Gravel	
5-10	10YR 4/2	92	10YR 5/6	5	C	M	Sandy	Prominent redox concentrations	
			10YR 5/2	3					
10-16	10YR 3/3	100					Sandy		
	oncentration, D=Deple	etion, RM	1=Reduced Matrix, N	MS=Mas	ked San	d Grains.		=Pore Lining, M=Matrix.	
Hydric Soil I Histosol			Dark Surface ((S7)				r Problematic Hydric Soils ³ : k (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,		airie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B		, , ,			ky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	n Sulfide (A4)		Thin Dark Surf	face (S9)	(LRR R	, MLRA 1	I49B) Polyvalue	Below Surface (S8) (LRR K, L)	
Stratified	Layers (A5)		High Chroma S	Sands (S	611) (LR	R K, L)	Thin Dark	Surface (S9) (LRR K, L)	
Depleted	I Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LR	RK, L)	Iron-Mang	ganese Masses (F12) (LRR K, L, R)	
	rk Surface (A12)		Loamy Gleyed		F2)			Floodplain Soils (F19) (MLRA 149B)	
	podic (A17)		Depleted Matri		-0)			nt Material (F21) (outside MLRA 145)	
•	A 144A, 145, 149B)		Redox Dark Si					llow Dark Surface (F22)	
	lucky Mineral (S1)		Depleted Dark		` '		Other (Ex	plain in Remarks)	
X Sandy R	leyed Matrix (S4)		Redox Depres Marl (F10) (LR	•	0)		³ Indicators	s of hydrophytic vegetation and	
	Matrix (S6)		Red Parent Ma		21) (MI I	DA 145)	wetland hydrology must be present,		
Stripped	Matrix (30)		Ned Falent Wa	ateriai (i	21) (IVILI	NA 140)		disturbed or problematic.	
	_ayer (if observed):								
Type: _									
Depth (ir	nches):						Hydric Soil Present	t? Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P13				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
<u>-</u>	relief (concave, convex, none): Convex Slope %: 2				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651348					
Soil Map Unit Name: BtA - Brems sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly disturb					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	within a Wetland? Yes No X				
Wetland Hydrology Present?	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
Road Prism at the south side of Furnessville road sloping south.					
, -					
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) Water-Stained Leaves (B	(B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3)Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro	ron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction ir	in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remark	<u> </u>				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No _x Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
Tomano.					

VEGETATION – Use scientific names of plants. Sampling Point: P13 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 **FACW** species 0 x 2 = 1. 0 2. FAC species 5 x 3 = 15 3. FACU species 112 x 4 = 448 4. UPL species 5 x 5 = 25 Column Totals: 122 (A) 488 6. Prevalence Index = B/A = 4.00 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Schedonorus arundinaceus **FACU** 3 - Prevalence Index is ≤3.0¹ 15 **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Plantago major No data in Remarks or on a separate sheet) 10 ___ 3. Taraxacum officinale No **FACU** 4. Equisetum arvense 5 No FAC Problematic Hydrophytic Vegetation¹ (Explain) 5 No **UPL** 5. Verbascum thapsus ¹Indicators of hydric soil and wetland hydrology must 23 **FACU** be present, unless disturbed or problematic. 6. Poa pratensis Yes Trifolium pratense 7 No **FACU Definitions of Vegetation Strata:** 7. 8. Trifolium repens **FACU** Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 122 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

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	ription: (Describe to	the dept				tor or co	onfirm the absence of in	dicators.)	
Depth	Matrix			x Featur		. 2			
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 5/3	100					Sandy	Gravel	
5-10	10YR 5/4	100					Sandy		
1			D - d	40. 14			21	Daniel Haliani M. Madala	
Hydric Soil I	ncentration, D=Deple	tion, Rivi=i	Reduced Matrix, N	/IS=IVIASI	ked Sand	Grains.		Pore Lining, M=Matrix. Problematic Hydric Soils	3.
Histosol (Dark Surface (S7)				(A10) (LRR K, L, MLRA	
	pedon (A2)	_	Polyvalue Belo	-	ce (S8) (I	RR R		e Redox (A16) (LRR K , L	
Black His		_	MLRA 149B		30 (00) (1			Peat or Peat (S3) (LRR	-
	Sulfide (A4)		Thin Dark Surf	,	(LRR R.	MLRA 1		elow Surface (S8) (LRR I	
	Layers (A5)	_	— High Chroma S					urface (S9) (LRR K, L)	, ,
Depleted	Below Dark Surface	(A11) _	Loamy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Manga	nese Masses (F12) (LRR	K, L, R)
Thick Dar	rk Surface (A12)	_	Loamy Gleyed	Matrix (F2)		Piedmont F	loodplain Soils (F19) (ML	RA 149B)
Mesic Sp	odic (A17)	_	Depleted Matri	x (F3)			Red Parent	Material (F21) (outside I	/ILRA 145)
(MLRA	A 144A, 145, 149B)	_	Redox Dark Su	ırface (F	6)		Very Shallo	w Dark Surface (F22)	
	ucky Mineral (S1)	_	Depleted Dark				Other (Expl	ain in Remarks)	
	eyed Matrix (S4)	_	Redox Depress		3)		3, ,,		
Sandy Re		_	Marl (F10) (LR		04) (84) F	A 445\		of hydrophytic vegetation	
Stripped i	Matrix (S6)	_	Red Parent Ma	ateriai (F.	21) (WILF	(A 145)		ydrology must be present sturbed or problematic.	ι,
Restrictive I	aver (if observed):						uniess dis	sturbed or problematic.	
Type:	ayer (ii observea).								
Depth (in	ches).						Hydric Soil Present?	Yes No	X
							Tiyano con i resent.		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P14				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
	ocal relief (concave, convex, none): Concave Slope %: 1				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651422	Long: -87.028875 Datum: NAD83				
Soil Map Unit Name: BtA - Brems sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes x No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly di					
Are Vegetation, Soil, or Hydrology naturally problem.					
	sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report	,				
Interdunal depression at the intersection of Furnessville Rd and Veden	i Rd.				
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) Water-Stained Leav	_				
High Water Table (A2) Aquatic Fauna (B13	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)					
Water Marks (B1) Hydrogen Sulfide Od					
Sediment Deposits (B2) Oxidized Rhizosphe	· / · · · · · · · · · · · · · · · · · ·				
Drift Deposits (B3) Presence of Reduce					
1 	ion in Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (• • • • • • • • • • • • • • • • • • • •				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	,				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:	<u> </u>				
	nes):				
Water Table Present? Yes No X Depth (inch	nes):				
Saturation Present? Yes No x Depth (inch	· ———				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
Fraxinus pennsylvanica	15	Yes	FACW	Number of Dominant Species
2. Salix nigra	10	Yes	OBL	That Are OBL, FACW, or FAC: 8 (A)
3				Total Number of Dominant
4				Species Across All Strata: 10 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 80.0% (A/B)
7				Prevalence Index worksheet:
	25	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)		•		OBL species 63 x 1 = 63
1. Cornus racemosa	7	Yes	FAC	FACW species 42 x 2 = 84
2. Rubus occidentalis	7	Yes	UPL	FAC species 46 x 3 = 138
3.				FACU species 10 x 4 = 40
4.				UPL species 7 x 5 = 35
				Column Totals: 168 (A) 360 (B)
6.				Prevalence Index = B/A = 2.14
_				
7		-Tatal Cause		Hydrophytic Vegetation Indicators:
Harb Charture (District) 40	14	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)	_			X 2 - Dominance Test is >50%
1. Solidago gigantea	7	No	FACW	X 3 - Prevalence Index is ≤3.01
2. Eutrochium maculatum	10	Yes	OBL	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
3. Carex lacustris	25	Yes	OBL	
4. Toxicodendron radicans	5	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Apocynum cannabinum	7	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
6. Stachys palustris	3	No	OBL	be present, unless disturbed or problematic.
7. Circaea canadensis	3	No	FACU	Definitions of Vegetation Strata:
8. Dichanthelium clandestinum	5	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Smilax tamnoides	7	No	FAC	diameter at breast height (DBH), regardless of height.
10. Cicuta maculata	5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
11. Solidago rugosa	5	No	FAC	and greater than or equal to 3.28 ft (1 m) tall.
12. Equisetum arvense	5	No	FAC	Herb – All herbaceous (non-woody) plants, regardless
	112	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)		•		
1. Vitis riparia	10	Yes	FAC	Woody vines – All woody vines greater than 3.28 ft in height.
2. Celastrus orbiculatus	7	Yes	FACU	
3.				Hydrophytic
4.				Vegetation Present? Yes X No
···	 17	=Total Cover		1 <u>~</u>
Remarks: (Include photo numbers here or on a separ		- Total Gover		
Remarks. (include prioto numbers here of on a separ	ale Sileel.)			

Sampling Point: P14

VEGETATION Continued – Use scientific names of plants. Sampling Point: P14 Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 25 =Total Cover Sapling/Shrub Stratum 8. 9. ____ 14 =Total Cover Herb Stratum _____ 15 ___ Yes FACW 13. Phalaris arundinacea 10 _ _ 14. Calamagrostis canadensis Yes OBL 16. _____ 21. 112 =Total Cover Woody Vine Stratum 7. 17 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc Depth	ription: (Describe t Matrix	o the de		<mark>ument tl</mark> x Featur		ator or co	onfirm the absence of indicators.)		
(inches)	Color (moist)	%	Color (moist)	% «	Type ¹	Loc ²	Texture Remarks		
0-6	10YR 3/1	100			<u> </u>		Sandy		
6-10	10YR 4/2	95	10YR 6/6	5			Sandy		
10-16	10YR 5/6	100					Sandy		
	ncentration, D=Deple	etion, RM	I=Reduced Matrix, M	/IS=Mas	ked Sand	d Grains.			
Hydric Soil I Histosol			Dark Surface (S7)			Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B)		
	ipedon (A2)		Polyvalue Belo		ce (S8) (LRR R.	Coast Prairie Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B		() (. ,	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroger	n Sulfide (A4)		Thin Dark Surfa	ace (S9)	(LRR R	, MLRA 1	149B) — Polyvalue Below Surface (S8) (LRR K, L)		
Stratified	Layers (A5)		High Chroma S	3ands (S	611) (LRI	R K, L)	Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky			RK, L)	Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)		Loamy Gleyed		F2)		Piedmont Floodplain Soils (F19) (MLRA 149B		
	odic (A17)		Depleted Matri		-0)		Red Parent Material (F21) (outside MLRA 14		
	A 144A, 145, 149B)		Redox Dark Su				Very Shallow Dark Surface (F22)		
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark Redox Depress				Other (Explain in Remarks)		
X Sandy R			Marl (F10) (LR	•	0)		³ Indicators of hydrophytic vegetation and		
	Matrix (S6)			Material (F21) (MLRA 145)			wetland hydrology must be present,		
	(- ',				, (unless disturbed or problematic.		
	.ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present? Yes X No		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Furnessville / Porter County Sampling Date: 5/24/2022						
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P15						
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W						
• • • •	relief (concave, convex, none): Convex Slope %: 1						
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.1651293	Long: -87.028924 Datum: NAD83						
Soil Map Unit Name: OcA - Oakvile fine sand	NWI classification: none						
· ————————————————————————————————————							
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrologysignificantly disturb	<u> </u>						
Are Vegetation, Soil, or Hydrologynaturally problema	atic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area						
Hydric Soil Present? Yes No X	within a Wetland? Yes No X						
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:						
Remarks: (Explain alternative procedures here or in a separate report.) This point is in the upland road prism a the intersection of Furnessville Road and Veden Road. This point was west of Veden road.							
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) Water-Stained Leaves (E	B9) Drainage Patterns (B10)						
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)						
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of							
Drift Deposits (B3) Presence of Reduced Iro							
Algal Mat or Crust (B4)Recent Iron Reduction in							
Iron Deposits (B5) Thin Muck Surface (C7) Other (Fundamental Research (B7)) Other (Fundamental Research (B7))							
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark							
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No x Depth (inches):							
Water Table Present? Yes No X Depth (inches):							
Saturation Present? Yes No x Depth (inches):	Wetland Hydrology Present? Yes No _X						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	avious inspections) if available.						
Describe Necorded Data (Stream gauge, monitoring won, donal priotes, pre	inous inspections, in available.						
Remarks:							

VEGETATION – Use scientific names of plants. Sampling Point: P15 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Sassafras albidum FACU Yes Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: 5 =Total Cover Total % Cover of: Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 FACW species 0 x 2 = 1. 0 2. FAC species 0 x 3 = x 4 = 3. FACU species 41 164 4. UPL species x 5 = Column Totals: 41 (A) 164 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Poa pratensis **FACU** 3 - Prevalence Index is ≤3.0¹ Rosa multiflora 5 No **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 data in Remarks or on a separate sheet) 10___ 3. Oxalis dillenii Yes **FACU** 4. Schedonorus arundinaceus 5 No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) Celastrus orbiculatus 1 5. **FACU** ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 36 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desci	ription: (Describe to	the de	pth needed to doc	ument tl	he indica	ator or co	onfirm the absence of indicato	rs.)		
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks		
0-6	10YR 3/2	100					Sandy			
6-10	10YR 4/3	89	10YR 3/1	3	C	M	Sandy			
			10YR 5/6	3						
			10YR 6/4	5						
¹ Type: C=Co	ncentration, D=Deple	tion RM	=Reduced Matrix N	 //S=Mas	ked San		² Location: PL=Pore Li	ning M=Matrix		
Hydric Soil II		tion, raiv	i-Reduced Matrix, I	/IO-IVIAS	Keu Gain	d Grains.	Indicators for Proble			
-			Dark Surface (C7)				LRR K, L, MLRA 149B)		
— Histosol (· · ·		Dark Surface (Polyvalue Belo		oo (CO) (I DD D		· · · · · · · · · · · · · · · · · · ·		
Black His	pedon (A2)		MLRA 149B		ce (36) (LKK K,		ox (A16) (LRR K, L, R) or Peat (S3) (LRR K, L, R)		
	Sulfide (A4)		Thin Dark Surf	•	(I PP P	MIDA		Surface (S8) (LRR K, L)		
	Layers (A5)		High Chroma S		-		Thin Dark Surface			
	Below Dark Surface	(Δ11)	Loamy Mucky					lasses (F12) (LRR K, L, R)		
	rk Surface (A12)	(Δ11)	Loamy Gleyed			K K, L)		ain Soils (F19) (MLRA 149B)		
	odic (A17)		Depleted Matri		1 2)			al (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		Redox Dark Su		6)		Very Shallow Dark			
	ucky Mineral (S1)		Depleted Dark	-	-		Other (Explain in F			
	eyed Matrix (S4)		Redox Depres				Other (Explain in t	(ciriality)		
Sandy Re	• , ,		Marl (F10) (LR	•	0)		³ Indicators of hydr	ophytic vegetation and		
	Matrix (S6)		Red Parent Ma		21) (MI I	RΔ 145)	wetland hydrology must be present,			
	WidthX (GG)			atoriai (i	21) (III 2 1	UA 140)	unless disturbed			
	ayer (if observed):									
Type:										
Depth (in	ches):						Hydric Soil Present?	Yes No _X_		
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Furnessville / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P16				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
·	relief (concave, convex, none): concave Slope %: 2				
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651290	Long: <u>-87.029049</u> Datum: <u>NAD83</u>				
Soil Map Unit Name: OcA - Oakvile fine sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes x No				
Are Vegetation, Soil, or Hydrology naturally problema	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam					
Somman of Theblives - Attach site map showing same	pinig point locations, transects, important reatures, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
This point is in a wetland south of Furnessville road and, east of Veden roa	d. This wetland is a forested wetland in an interdunal depression.				
The wetland dominiated by spice bush, red maple, and black gum.					
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) Water-Stained Leaves (B	B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
X Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of					
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Recent Iron Reduction in					
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	ks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No x Depth (inches):					
Water Table Present? Yes x No Depth (inches):					
Saturation Present? Yes x No Depth (inches):					
(includes capillary fringe)	<u> </u>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
Surface Water Present near this point but not on point					

VEGETATION – Use scientific names of plants.

lute Dominant over Species?	Indicator	
	Status	Dominance Test worksheet:
Yes Yes	FACW	Number of Dominant Species
Yes	FAC	That Are OBL, FACW, or FAC:10 (A)
Yes	FAC	Total Number of Dominant
		Species Across All Strata: 12 (B)
		Percent of Dominant Species
		That Are OBL, FACW, or FAC: 83.3% (A/B
		Prevalence Index worksheet:
=Total Cover		Total % Cover of: Multiply by:
		OBL species 0 $x 1 = 0$
5 Yes	FAC	FACW species 95 x 2 = 190
Yes	FACW	FAC species 97 x 3 = 291
		FACU species 19 x 4 = 76
		UPL species 0 x 5 = 0
		Column Totals: 211 (A) 557 (B
		Prevalence Index = B/A = 2.64
		Hydrophytic Vegetation Indicators:
=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
		X 2 - Dominance Test is >50%
No	FAC	X 3 - Prevalence Index is ≤3.0 ¹
		4 - Morphological Adaptations ¹ (Provide supporting
		data in Remarks or on a separate sheet)
Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
No	FACW	-
Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
No	FACU	Definitions of Vegetation Strata:
Yes	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in
Yes	FACU	diameter at breast height (DBH), regardless of height
		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
=Total Cover		Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.
) Yes	FAC	Woody vines – All woody vines greater than 3.28 ft i height.
		Hydrophytic
		Vegetation Present? Yes X No
		· · · · · · · · · · · · · · · · · · ·
	Section Sect	Second S

Profile Desci	ription: (Describe to	the de				ator or co	confirm the absence of indicators.)	
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture Remarks	
0-4	10YR 2/1	100					Mucky Sand	
4-14	10YR 2/1	96	10YR 5/2	4	C	<u>M</u>	Sandy	
								_
								—
								—
								_
¹ Type: C=Co	ncentration, D=Deple	tion RM			 kad San		. ² Location: PL=Pore Lining, M=Matrix.	—
		tion, raw	-rteduced Matrix, i	VIO-IVIAS	Neu Gain	u Oranis.		
Hydric Soil II Histosol (Dark Surface ((S7)			Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
	pedon (A2)		Polyvalue Beld		ce (S8) (I DD D	Coast Prairie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B		(50) (LIXIX IX,	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	₹)
	Sulfide (A4)		Thin Dark Surf	•	(I RR R	MI RA 1		,
	Layers (A5)		High Chroma		-		Thin Dark Surface (S9) (LRR K, L)	
	Below Dark Surface	(A11)	Loamy Mucky				Iron-Manganese Masses (F12) (LRR K, L, I	R)
Thick Da	rk Surface (A12)		Loamy Gleyed	l Matrix (F2)		Piedmont Floodplain Soils (F19) (MLRA 14	9B)
Mesic Sp	odic (A17)		Depleted Matr	ix (F3)			Red Parent Material (F21) (outside MLRA	145)
	A 144A, 145, 149B)		Redox Dark S	-	-		Very Shallow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark				Other (Explain in Remarks)	
	eyed Matrix (S4)		Redox Depres	•	8)		3	
X Sandy Re			Marl (F10) (LR		04) (84) [DA 445\	³ Indicators of hydrophytic vegetation and	
Stripped	Matrix (S6)		Red Parent Ma	ateriai (F	∠ 1) (IVILI	XA 145)	wetland hydrology must be present, unless disturbed or problematic.	
Restrictive L	ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Present? Yes X No	-
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Furnessville / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P17				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
	relief (concave, convex, none): Convex Slope %: 2				
	Long: <u>-87.028595</u> Datum: <u>NAD83</u>				
Soil Map Unit Name: Mn - Maumee loamiy sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly distur	bed? Are "Normal Circumstances" present? Yes x No				
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.				
Hoderatorio Venetation Processi	Is the Committed Asset				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No X				
Hydric Soil Present? Wetland Hydrology Present? Yes No X No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	ii yoo, optional victiona cito ib.				
Road prism off Furnessville Road sloping towards the adjacent of wetland	d. West of Veden road.				
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) Water-Stained Leaves (I	(B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (· · · · · · · · · · · · · · · · · · ·				
	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced In					
Algal Mat or Crust (B4)Recent Iron Reduction in	. , , ,				
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
	(AC-Neutral Test (D3)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches): Water Table Present? Yes No _X Depth (inches):					
Saturation Present? Yes No X Depth (inches):					
(includes capillary fringe)	Would find the following the section in the				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
	, ,				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P17 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 4 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 0 x 2 = 1. 0 2. FAC species 7 x 3 = 3. FACU species 72 x 4 = 288 4. UPL species 15 x 5 = Column Totals: 94 (A) 384 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% Herb Stratum (Plot size: 10) Viola sororia **FAC** 3 - Prevalence Index is ≤3.0¹ 15 Yes UPL 4 - Morphological Adaptations¹ (Provide supporting 2 Ribes missouriense data in Remarks or on a separate sheet) 10 ___ 3. Parthenocissus quinquefolia Yes **FACU** 4. Celastrus orbiculatus 7 **FACU** Problematic Hydrophytic Vegetation¹ (Explain) No 10 Yes **FACU** 5. Taraxacum officinale ¹Indicators of hydric soil and wetland hydrology must 5 **FACU** be present, unless disturbed or problematic. 6. Circaea canadensis No 20 **FACU Definitions of Vegetation Strata:** 7. Schedonorus arundinaceus Yes 8. Ambrosia artemisiifolia 5 No **FACU** Tree - Woody plants 3 in. (7.6 cm) or more in 9 Rosa multiflora 5 **FACU** diameter at breast height (DBH), regardless of height. No Plantago major 7 No **FACU** Sapling/shrub – Woody plants less than 3 in. DBH Oxalis dillenii 3 **FACU** and greater than or equal to 3.28 ft (1 m) tall. 11. No 12. Herb - All herbaceous (non-woody) plants, regardless 94 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desci	ription: (Describe to	the de	pth needed to doc	ument tl	ne indica	ator or co	onfirm the absence of indica	tors.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remark	(S
0-4	10YR 3/2	100					Sandy		
4-10	10YR 3/2	98	10YR 5/2	2	C	M	Sandy		
10-18	10YR 3/3	100							
1Type: C=Co	ncentration, D=Deple	tion DM	I-Poducod Matrix				² Location: PL=Pore	Lining M=Mat	riv
Hydric Soil I		uon, Kiv	i-Reduced Matrix, i	VIO-IVIASI	keu San	J GIAIIIS.	Indicators for Probl		
Histosol (Dark Surface	(97)			2 cm Muck (A10	-	
	pedon (A2)		Polyvalue Belo		ce (S8) (I RR R	Coast Prairie Re		
Black His			MLRA 149E		00 (00) (5 cm Mucky Pea		
	Sulfide (A4)		Thin Dark Sur	•	(I RR R	MIRA			
	Layers (A5)		High Chroma		-		Thin Dark Surface		
	Below Dark Surface	(Δ11)	Loamy Mucky				Iron-Manganese		=
	rk Surface (A12)	(7,11)	Loamy Gleyed			ix ix, L)	Piedmont Flood		
	odic (A17)		Depleted Matr	-	2)			•	side MLRA 145)
	A 144A, 145, 149B)		Redox Dark S		6)		Very Shallow Da		
	ucky Mineral (S1)		Depleted Dark	-	-		Other (Explain in		.2)
	eyed Matrix (S4)		Redox Depres				Other (Explain ii	r (cinario)	
Sandy Re			Marl (F10) (LF	•	3)		³ Indicators of hydronical	dronhytic yede	tation and
	Matrix (S6)		Red Parent M		21) (MI I	2Δ 145)	wetland hydro		
ourpped	watix (00)		Red Farent W	ateriai (i	21) (IVILI	VA 140)	unless disturb		
	ayer (if observed):								
Type: _								.,	
Depth (in	ches):						Hydric Soil Present?	Yes	No <u>X</u>
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Furnessville / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P19				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
·	relief (concave, convex, none): convex Slope %: 5				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651448	Long: -87.025856 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamiy sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb	<u></u>				
Are Vegetation, Soil, or Hydrology naturally problema	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.				
Lludrambutia Vagatatian Dracant?	is the Compled Avec				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? YesNo_X_				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No X If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	11 yes, optional fredam one is:				
Road Prism adjacent to wetland, dominated by tall fescue					
Trodu i fishi adjacent to wedand, dominated by tail recode					
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) Water-Stained Leaves (E					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	<u> </u>				
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Recent Iron Reduction in					
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	,				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No x Depth (inches):					
Saturation Present? Yes No x Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
, , , , , , , , , , , , , , , , , , , ,	,				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P19 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 **FACW** species 0 x 2 = 1. 0 2. FAC species 0 x 3 = 3. FACU species 115 x 4 = 460 4. UPL species 3 x 5 = 15 5. Column Totals: 118 (A) 475 6. Prevalence Index = B/A = 4.03 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 2 - Dominance Test is >50% Schedonorus arundinaceus **FACU** 3 - Prevalence Index is ≤3.0¹ Taraxacum officinale 10 No **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 data in Remarks or on a separate sheet) 5 __ 3. Fragaria virginiana No **FACU** 4. Plantago lanceolata 10 No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) Daucus carota 3 5. No UPL ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 118 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descripe	ription: (Describe t Matrix	o the de		<mark>ument th</mark> x Feature		ator or co	onfirm the absence of	f indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks
0-5	10YR 3/2	100					Sandy	grave	el
5-16	10YR 5/4	100					Sandy		
	10111071								
¹ Type: C=Co	ncentration, D=Depl	etion, RM	1=Reduced Matrix, M	/IS=Mas	ked Sand	d Grains.		L=Pore Lining, M=Mat	
Hydric Soil I								or Problematic Hydri	
Histosol (` ,		Dark Surface (ick (A10) (LRR K, L, N	
	ipedon (A2)		Polyvalue Belo		ce (S8) (I	LRR R,		rairie Redox (A16) (LR	
Black His	stic (A3) n Sulfide (A4)		MLRA 149B Thin Dark Surfa	•	(I DD D	MIDA		icky Peat or Peat (S3) e Below Surface (S8)	
	Layers (A5)		High Chroma S					k Surface (S9) (LRR I	
	Below Dark Surface	(A11)	Loamy Mucky I					nganese Masses (F12)	·
	rk Surface (A12)	(, , , , ,	Loamy Gleyed			· · · · · · · · · · · · · · · · · · ·		nt Floodplain Soils (F1	
	odic (A17)		Depleted Matrix		,			ent Material (F21) (ou	
(MLRA	A 144A, 145, 149B)		Redox Dark Su	ırface (F	6)		Very Sha	allow Dark Surface (F2	22)
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Ex	xplain in Remarks)	
	eyed Matrix (S4)		Redox Depress	-	8)				
	edox (S5)		Marl (F10) (LR					rs of hydrophytic vege	
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)		d hydrology must be p	
5	// L D						unless	disturbed or problema	atic.
	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Presen	nt? Yes	NoX
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Furnessville / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P20				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
<u>-</u>	relief (concave, convex, none): convex Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651128	Long: -87.022090 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamiy sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes x No				
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Is the Sampled Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present?	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
l ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	essville road near a roadside ditch. Dominated by green ash, american elm				
and jewelweed.					
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) Water-Stained Leaves (B	B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of Deposits (B2)					
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Thin Muck Surface (C7)	• • • • • • • • • • • • • • • • • • • •				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	Shallow Aquitard (D3) ks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No x Depth (inches):					
Water Table Present? Yes x No Depth (inches):					
Saturation Present? Yes x No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P20 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet: FACW** 1. Ulmus americana Yes Number of Dominant Species 2. Quercus bicolor Yes **FACW** That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: 5 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 80 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: **OBL** species Yes **FACW** species 173 x 2 = 1. **FACW** 346 Fraxinus pennsylvanica 2. Lindera benzoin Yes **FACW** FAC species 1 x 3 = 5 5 x 4 = 3. Viburnum opulus No **FACW** FACU species 4. UPL species x 5 = 5. Column Totals: 184 (A) 374 6. Prevalence Index = B/A = 2.03 7. **Hydrophytic Vegetation Indicators:** 40 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% Herb Stratum (Plot size: Impatiens capensis **FACW** X 3 - Prevalence Index is ≤3.0¹ 5 **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Parthenocissus quinquefolia No data in Remarks or on a separate sheet) 1 __ 3. Eupatorium serotinum No FAC 4. Phalaris arundinacea 3 No **FACW** Problematic Hydrophytic Vegetation¹ (Explain) Symplocarpus foetidus 5 5. OBL ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 64 =Total Cover of size, and woody plants less than 3.28 ft tall.

=Total Cover

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

Woody Vine Stratum (Plot size:

2.

3.

20

No_

Woody vines - All woody vines greater than 3.28 ft in

Yes X

height.

Hydrophytic

Vegetation

Present?

		the depth				ator or co	onfirm the absence of indicators.)	
Depth	Matrix			ox Featur		. 2		
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture Rema	arks
0-4	10YR 2/1	100					Mucky Sand	
4-16	10YR 3/2	95	10YR 3/3	5	<u>D</u>	M	Sandy	
								-
				· ——				
¹ Type: C=Co	ncentration, D=Deple	tion, RM=R	educed Matrix,	MS=Masl	ked San	d Grains.	² Location: PL=Pore Lining, M=M	latrix.
Hydric Soil Ir							Indicators for Problematic Hyd	
Histosol (A1)		_Dark Surface	(S7)			2 cm Muck (A10) (LRR K, L ,	MLRA 149B)
Histic Epi	pedon (A2)		_Polyvalue Bel	ow Surfac	ce (S8) (LRR R,	Coast Prairie Redox (A16) (L	RR K, L, R)
Black His			MLRA 149	,			5 cm Mucky Peat or Peat (S	
	Sulfide (A4)		_Thin Dark Sur		-			
	Layers (A5)	_	_High Chroma				Thin Dark Surface (S9) (LRF	•
	Below Dark Surface	(A11) <u> </u>	_Loamy Mucky			RK,L)	Iron-Manganese Masses (F1	
	k Surface (A12)		_Loamy Gleye		F2)		Piedmont Floodplain Soils (F	
	odic (A17)		_ Depleted Mati				Red Parent Material (F21) (o	
	A 144A, 145, 149B)	_	_Redox Dark S				Very Shallow Dark Surface (F22)
	ucky Mineral (S1)	_	_Depleted Dark				Other (Explain in Remarks)	
Sandy Re	eyed Matrix (S4)	_	_Redox Depres	-	5)		³ Indicators of hydrophytic ve	actation and
			_ Marl (F10) (LI		24) /MI I	DA 145\	wetland hydrology must be	
Suipped i	Matrix (S6)		_Red Parent M	ateriai (F.	∠ 1) (IVILI	KA 145)	unless disturbed or proble	
Restrictive L	ayer (if observed):							
Type: _								
Depth (inc	ches):						Hydric Soil Present? Yes X	No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail/ Furnessville Rd	City/County: Beverly Shore / Porter County Sampling Date: 5/24/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P21				
Investigator(s): D, James, L. Loyd, S. McDaniel	Section, Township, Range: NW 1/4 NW 1/4 S20 T37N R5W				
	elief (concave, convex, none): convex Slope %: 1				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.651228	Long: -87.022090 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamiy sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly disturb					
Are Vegetation, Soil, or Hydrology naturally problema					
SUMMARY OF FINDINGS – Attach site map showing sam					
West of Market States					
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X Ves No X	Is the Sampled Area within a Wetland? Yes No X				
Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	11 you, opasina 77 shand 3.15 .2.				
Point is on the road prism adjecent to the wetland depression. This area is	iust south of the intersection of Furnessville Road and Teale Drive.				
Tollito on the road prom adjourn to the restand depression	just south of the interession of Families and Teach 2				
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) Water-Stained Leaves (E	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4)Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes x No Depth (inches):					
Water Table Present? Yes x No Depth (inches):					
Saturation Present? Yes x No Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P21 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 1 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 33.3% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 10 x 2 = 1. 20 2. FAC species 5 x 3 = 15 56 3. FACU species x 4 = 4. UPL species x 5 = Column Totals: 71 (A) 259 6. Prevalence Index = B/A = 3.65 **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 2 - Dominance Test is >50% Schedonorus arundinaceus 25 **FACU** 3 - Prevalence Index is ≤3.0¹ 3 No **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Parthenocissus quinquefolia data in Remarks or on a separate sheet) 10 ___ 3. Taraxacum officinale Yes **FACU** 4. Celastrus orbiculatus 3 No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) 5 No FAC 5. Symphyotrichum lateriflorum ¹Indicators of hydric soil and wetland hydrology must 10 **FACW** be present, unless disturbed or problematic. 6. Impatiens capensis Yes 5 No **FACU Definitions of Vegetation Strata:** 7. Galium aparine 8. Liriodendron tulipifera No **FACU** Tree - Woody plants 3 in. (7.6 cm) or more in Rosa multiflora 9. 7 No **FACU** diameter at breast height (DBH), regardless of height. 10. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 11. Herb - All herbaceous (non-woody) plants, regardless 71 =Total Cover of size, and woody plants less than 3.28 ft tall. 20) Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

	ription: (Describe to	the depti				tor or co	onfirm the absence of indic	cators.)	
Depth	Matrix			x Feature					
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/3	100					Sandy		
6-16	10YR 4/4	100					Sandy		
			_						
1 _{Type:} C=Ce	ncentration, D=Deple		Dadwaad Matrix N			Crains	2l acation: DI =Dor	a Lining M-Matrix	
Hydric Soil I		uon, Rivi–r	Reduced Matrix, N	/IS-IVIASI	keu Sanu	Grains.		e Lining, M=Matrix. blematic Hydric So	nile ³ :
Histosol (Dark Surface (S7)				10) (LRR K, L, MLR	
	pedon (A2)	_	Polyvalue Belo	-	ce (S8) (I	RR R.		Redox (A16) (LRR K	
Black His		_	MLRA 149B		() (-	-,		eat or Peat (S3) (LR	· ·
	Sulfide (A4)		Thin Dark Surf	,	(LRR R,	MLRA 1		w Surface (S8) (LR	-
	Layers (A5)		— High Chroma S					ace (S9) (LRR K, L)	-
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Manganes	se Masses (F12) (LF	RR K, L, R)
Thick Dar	rk Surface (A12)	_	Loamy Gleyed	Matrix (I	F2)		Piedmont Floo	dplain Soils (F19) (N	/ILRA 149B)
Mesic Sp	odic (A17)	_	Depleted Matri	x (F3)				aterial (F21) (outsid	e MLRA 145)
(MLRA	A 144A, 145, 149B)	_	Redox Dark Su	ırface (F	6)		Very Shallow [Dark Surface (F22)	
	ucky Mineral (S1)	_	Depleted Dark				Other (Explain	in Remarks)	
	eyed Matrix (S4)	_	Redox Depress		3)		3		
Sandy Re		_	Marl (F10) (LR		04) (84) 5	\ A 445\		ydrophytic vegetatio	
Stripped i	Matrix (S6)	_	Red Parent Ma	ateriai (F.	21) (WILH	(A 145)	•	rology must be presented or problematic.	∍nt,
Restrictive I	ayer (if observed):						uniess dista	bed of problematic.	
Type:	ayer (ii observea).								
Depth (in	ches).						Hydric Soil Present?	Yes	No X
							,		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Furnessville / Porter County Sampling Date: 5/27/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P22				
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 SW 1/4 S17 T37N R5W				
· · · · · · · · · · · · · · · · · · ·	relief (concave, convex, none): concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 98 Lat: 41.651901	Long: -87.023862 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly disturb					
Are Vegetation, Soil, or Hydrologynaturally problema	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.) Point is in a forested wetland on the northeast corner of Teale Drive and Furnessville Road. Dominated by red maple. The central portion of the wetland was indunated at the time of data collection.					
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) Water-Stained Leaves (E					
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1)Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of Peduced Irre	• () —				
Drift Deposits (B3) Presence of Reduced Iro Algal Mat or Crust (B4) Recent Iron Reduction in	· · ·				
Iron Deposits (B5) Recent from Reduction in	· · · · · · · · · · · · · · · · · · ·				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:	<u></u>				
Surface Water Present? Yes No X Depth (inches):					
Water Table Present? Yes X No Depth (inches):					
Saturation Present? Yes X No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

VEGETATION – Use scientific names of plants.

/EGETATION – Use scientific names of pla				Sampling Point: P22		
<u>Tree Stratum</u> (Plot size:30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. Acer saccharinum	80	Yes	FACW	Number of Dominant Species		
2. Acer rubrum	75	Yes	FAC	That Are OBL, FACW, or FAC: 4 (A)		
3.				Total Number of Dominant		
4.				Species Across All Strata: 5 (B)		
5.				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC: 80.0% (A/B)		
7.				Prevalence Index worksheet:		
	155	=Total Cover		Total % Cover of: Multiply by:		
Sapling/Shrub Stratum (Plot size: 20)		-		OBL species 15 x 1 = 15		
				FACW species 103 x 2 = 206		
2.		-		FAC species 105 x 3 = 315		
3				FACU species 20 x 4 = 80		
4.				UPL species 0 x 5 = 0		
5				Column Totals: 243 (A) 616 (B)		
6		- —		Prevalence Index = B/A = 2.53		
<u> </u>						
7.		=Total Cover		Hydrophytic Vegetation Indicators:		
Herb Stratum (Plot size: 10)		= 10tal Cover		1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%		
	20	Vaa	5 40			
Toxicodendron radicans Panylys deltaides		Yes	FAC	X 3 - Prevalence Index is ≤3.0 ¹		
2. Populus deltoides	10	No No	FAC	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)		
3. Solidago gigantea	7	No No	FACW	•		
4. Fraxinus pennsylvanica	3	No No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
5. Thelypteris palustris	3	No No	FACW	¹ Indicators of hydric soil and wetland hydrology must		
6. Glyceria maxima	15	Yes	OBL	be present, unless disturbed or problematic.		
7. Parthenocissus quinquefolia	20	Yes	FACU	Definitions of Vegetation Strata:		
8. Impatiens capensis	10	No	FACW_	Tree – Woody plants 3 in. (7.6 cm) or more in		
9.		- ——		diameter at breast height (DBH), regardless of height.		
10		- ——		Sapling/shrub – Woody plants less than 3 in. DBH		
11				and greater than or equal to 3.28 ft (1 m) tall.		
12				Herb – All herbaceous (non-woody) plants, regardless		
	88	=Total Cover		of size, and woody plants less than 3.28 ft tall.		
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in		
1.				height.		
2				Hydrophytic		
3.				Vegetation		
4				Present? Yes X No No		
		_=Total Cover				
Remarks: (Include photo numbers here or on a sepa	rate sheet.)	-		1		
	•					

Depth	ription: (Describe to Matrix	o tne ae		ocument ti dox Featur		ator or c	onfirm the absence of	indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 2/1	95	10YR 5/8	5	C	m_	Sandy	Prominent redox concentrations
12-16	10YR 6/1	100					Sandy	
	-							
Type: C=Co	oncentration, D=Deple	etion RI	M=Reduced Matrix	— —— c MS=Mas	ked San	d Grains	² I ocation: PI	
Hydric Soil		,		,				r Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surfac	e (S7)				ck (A10) (LRR K, L, MLRA 149B)
Histic Ep	oipedon (A2)		Polyvalue B	elow Surfa	ce (S8) (LRR R,	Coast Pra	airie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		MLRA 14	-				cky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Thin Dark S					Below Surface (S8) (LRR K, L)
	Layers (A5)	,	High Chrom	-				Surface (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Muc	-		R K, L)		ganese Masses (F12) (LRR K, L, R)
	ark Surface (A12) podic (A17)		Loamy Gley Depleted Ma	-	F2)			: Floodplain Soils (F19) (MLRA 149B) :nt Material (F21) (outside MLRA 145
	A 144A, 145, 149B)		Redox Dark		-6)			llow Dark Surface (F22)
	lucky Mineral (S1)		Depleted Da	-				plain in Remarks)
	leyed Matrix (S4)		Redox Depr		` '			,
X Sandy R	edox (S5)		Marl (F10) (LRR K, L)			³ Indicators	s of hydrophytic vegetation and
Stripped	Matrix (S6)		Red Parent	Material (F	21) (ML l	RA 145)	wetland	d hydrology must be present,
							unless	disturbed or problematic.
	Layer (if observed):							
Type: _								
Depth (ir	nches):						Hydric Soil Present	t? Yes X No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Chesterton / Porter County Sampling Date: 5/27/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P23				
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 of SW 1/4 S17 T37N R5W				
	relief (concave, convex, none): none Slope %: 2%				
Subregion (LRR or MLRA): LRR L, MLRA 98 Lat: 41.652122	Long: -87.023216 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly distur					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No_X_				
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
Point is north of the wetland in an upland area dominated by burning bush	and periwinkle.				
·	·				
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced In					
Algal Mat or Crust (B4) Recent Iron Reduction in	in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	7) Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes X No Depth (inches):					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants.

Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 15 x 2 = 30		
That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0		
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0		
Species Across All Strata: 6 (B) Percent of Dominant Species 16.7% (A/B) That Are OBL, FACW, or FAC: 16.7% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0		
Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0		
That Are OBL, FACW, or FAC:		
Total % Cover of: Multiply by: OBL species 0 x 1 = 0		
OBL species 0 x 1 = 0		
FACW species 15 x 2 = 30		
FAC species15 x 3 =45		
FACU species 122 x 4 = 488		
UPL species 130 x 5 = 650		
Column Totals: 282 (A) 1213 (B)		
Prevalence Index = B/A = 4.30		
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.		
Definitions of Vegetation Strata:		
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
and greater than or equal to 5.20 ft (1 m) tall.		
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
of size, and woody plants less than 3.26 it tall.		
Woody vines – All woody vines greater than 3.28 ft in height.		
neight.		
Hydrophytic		
Vegetation No. V		
Present? Yes No _X		
•		

Sampling Point: P23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Rema	irks
0-12	10YR 2/1	100					Sandy		
12-15	10YR 3/1	100					Sandy		
15-23	10YR 6/1	96	10YR 5/6	2	С	M	Sandy	Prominent redox	concentrations
			10YR 4/6	2					
¹ Type: C=Co	ncentration, D=Deple	tion, RN		MS=Masl	ked Sand	d Grains.	² Location: PL=	Pore Lining, M=Ma	atrix.
Hydric Soil II								Problematic Hydi	
Histosol (Dark Surface ((S7)				(A10) (LRR K, L ,	
	pedon (A2)			lyvalue Below Surface (S8) (LRR R,				e Redox (A16) (L	
Black His				MLRA 149B)				Peat or Peat (S3	
	Sulfide (A4)		Thin Dark Sur	•	(LRR R	, MLRA		elow Surface (S8	
	Layers (A5)			gh Chroma Sands (S11) (LRR K, L)			Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky					nese Masses (F1	· ·
	rk Surface (A12)	. ,	Loamy Gleyed			,	Piedmont Floodplain Soils (F19) (MLRA 149B)		
			Depleted Matr		•				utside MLRA 145)
			Redox Dark S	urface (F	6)			w Dark Surface (F	
Sandy Mu	ucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Expl	ain in Remarks)	
Sandy Gl	eyed Matrix (S4)		Redox Depres	sions (F	3)				
Sandy Re	edox (S5)		Marl (F10) (LF	RR K, L)			³ Indicators of hydrophytic vegetation and		
		Red Parent Ma	d Parent Material (F21) (MLRA 145)			wetland hydrology must be present, unless disturbed or problematic.			
Restrictive L	ayer (if observed):						uniess di	sturbed or problem	nauc.
Type:									
Depth (in	ches):						Hydric Soil Present?	Yes	NoX
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Chesterton / Porter County Sampling Date: 5/27/2022						
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P24						
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 of SW 1/4 S17 T37N R5W						
• (,	relief (concave, convex, none): convex Slope %: 0						
,	·						
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.652071	Long: <u>-87.024024</u> Datum: <u>NAD83</u>						
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrologysignificantly distur	rbed? Are "Normal Circumstances" present? Yes X No						
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sam							
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area						
Hydric Soil Present? Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 17						
Remarks: (Explain alternative procedures here or in a separate report.) Point is in a wetland on the west side of Teale Dr. the forest is dominated by oak and maple with a fern dominated understory.							
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) X Water-Stained Leaves (I							
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)						
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	• () —						
Presence of Reduced In							
Algal Mat or Crust (B4) Recent Iron Reduction in							
Iron Deposits (B5) Thin Muck Surface (C7)							
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar							
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No X Depth (inches):							
Water Table Present? Yes X No Depth (inches):							
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? Yes X No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	avious inspections) if available:						
Describe Necorded Data (stream gauge, monitoring well, aenai priotos, pre	evious irispections), ir available.						
Remarks:							

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Fraxinus pennsylvanica	10	No	FACW	Number of Dominant Species			
2. Nyssa sylvatica	20	No	FAC	That Are OBL, FACW, or FAC:3(A)			
3. Quercus palustris	60	Yes	FACW	Total Number of Dominant			
4. Acer rubrum	30	Yes	FAC	Species Across All Strata: 5 (B)			
5.							
0				Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)			
7				Prevalence Index worksheet:			
<i>1.</i>	120	=Total Cover					
Operation of Observations (Physics and Operations)	120	- rotal Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 20)				OBL species 63 x 1 = 63			
1. Rosa multiflora	20	Yes	FACU	FACW species 105 x 2 = 210			
2. Euonymus alatus	15	Yes	UPL	FAC species55 x 3 =165			
3				FACU species 27 x 4 = 108			
4				UPL species15 x 5 =75			
5				Column Totals: 265 (A) 621 (B)			
6.				Prevalence Index = B/A = 2.34			
7.				Hydrophytic Vegetation Indicators:			
	 35	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)				X 2 - Dominance Test is >50%			
	7	No	FACIL	I — , I			
1. Potentilla simplex	7	No	FACU	X 3 - Prevalence Index is ≤3.0¹			
2. Osmunda spectabilis	60	Yes	OBL	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)			
3. Osmunda cinnamomea	15	No	FACW				
4. Onoclea sensibilis	15	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
5. Impatiens capensis	5	No	FACW	¹ Indicators of hydric soil and wetland hydrology must			
6. Persicaria virginiana	5	No	FAC	be present, unless disturbed or problematic.			
7. Cicuta maculata	3	No	OBL	Definitions of Vegetation Strata:			
8.				Tree – Woody plants 3 in. (7.6 cm) or more in			
9.				diameter at breast height (DBH), regardless of height.			
10.							
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
				and grouter than or equal to 0.20 it (1 iii) tail.			
12				Herb – All herbaceous (non-woody) plants, regardless			
	110	=Total Cover		of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in			
1				height.			
2				Hydrophytic			
3				Vegetation			
4				Present? Yes X No No			
		=Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)							

Sampling Point: P24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		-	x Featur				•	
(inches)	Color (moist)	%	Color (moist)	_ %	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/1	100					Sandy		
6-14	10YR 2/1	80	10YR 4/6	20	<u> </u>	M	Sandy Promine	ent redox concentrations	
14-20	10YR 4/6	97	10YR 4/3	3	D	М	Sandy		
							· · · · · · · · · · · · · · · · · · ·		
	oncentration, D=Deple	etion, RM	I=Reduced Matrix, M	/IS=Mas	ked Sand	d Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :		
Hydric Soil I Histosol			2 Dark Surface (97)				RR K, L, MLRA 149B)	
	ipedon (A2)			Polyvalue Below Surface (S8) (LRR R,			? Coast Prairie Redox		
Black His			MLRA 149B		00 (00) (.			Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa	•	(LRR R	, MLRA 1			
Stratified	Layers (A5)		High Chroma S	Sands (S	11) (LRF	R K, L)	? Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky I	Mineral	(F1) (LRI	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)		Loamy Gleyed		F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	oodic (A17)		Depleted Matrix (F3)				Red Parent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B) ucky Mineral (S1)		Redox Dark Surface (F6) Depleted Dark Surface (F7)				Very Shallow Dark Surface (F22) Other (Explain in Remarks)		
	leyed Matrix (S4)		Redox Depress				Other (Explain in Ne	anarks)	
X Sandy R			Marl (F10) (LRR K, L)				³ Indicators of hydrophytic vegetation and		
? Stripped Matrix (S6)			Red Parent Material (F21) (MLRA 145)			wetland hydrology must be present,			
						unless disturbed or problematic.			
	ayer (if observed):								
Type: _									
Depth (in	iches):						Hydric Soil Present?	Yes _ X _ No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Chesterton / Porter County Sampling Date: 5/27/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P25
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 of SW 1/4 S17 T37N R5W
	I relief (concave, convex, none): non Slope %: 2
Subregion (LRR or MLRA): LRR L, MLRA 98 Lat: 41.652109	Long: -87.024105 Datum: NAD83
Soil Map Unit Name: OaC - Oakville fine sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	` ` '
Are Vegetation, Soil, or Hydrology significantly distu	
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	-
Point is on a shrubby upland rise between wetlands on Teale Dr. Domina	ted by buring bush and sassafras.
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) Water-Stained Leaves	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Oxidized Rhizospheres	• • • • • • • • • • • • • • • • • • • •
Drift Deposits (B3) Presence of Reduced I	Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)Recent Iron Reduction	in Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	arks)Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches)): _
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	
I e e e e e e e e e e e e e e e e e e e	

<u>Tree Stratum</u> (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. Ulmus americana	10	No No	FACW				
2. Acer rubrum	75	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)			
3. Nyssa sylvatica	10	No	FAC	That Ale Obl., I AOW, OF AC.			
4.		NO		Total Number of Dominant Species Across All Strata: 7 (B)			
5. 6.		·		Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)			
7.				Prevalence Index worksheet:			
	95	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 20)		_		$\overline{\text{OBL species}} \qquad 0 \qquad \overline{\text{x 1 = 0}}$			
1. Euonymus alatus	60	Yes	UPL	FACW species 10 x 2 = 20			
2. Sassafras albidum	15	Yes	FACU	FAC species 105 x 3 = 315			
3.				FACU species 63 x 4 = 252			
4.				UPL species 125 x 5 = 625			
5.				Column Totals: 303 (A) 1212 (B)			
6.				Prevalence Index = B/A = 4.00			
7.				Hydrophytic Vegetation Indicators:			
	 75	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		•		2 - Dominance Test is >50%			
Celastrus orbiculatus	20	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹			
2. Sassafras albidum	5	No	FACU	4 - Morphological Adaptations ¹ (Provide supporting			
Carya cordiformis	 5	No No	FAC	data in Remarks or on a separate sheet)			
4. Nabalus albus	20	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
5. Euonymus alatus	60	Yes	UPL	<u> </u>			
6. Conopholis americana	5	No No	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7. Viola sororia	5	No	FAC	Definitions of Vegetation Strata:			
8. Maianthemum racemosum	3	No	FACU				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
10.							
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
12.							
	123	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size: 20)		•		Woody vines – All woody vines greater than 3.28 ft in			
Smilax rotundifolia	10	Yes	FAC	height.			
2.							
3.				Hydrophytic			
4.				Vegetation Present? Yes No X			
· -	10	=Total Cover					
Remarks: (Include photo numbers here or on a separ							
Tremands. (modae photo namboro nere er en a separ	ate sheet.)						

Sampling Point: P25

	ription: (Describe to	the depth				tor or co	onfirm the absence of indic	ators.)	
Depth	Matrix			x Feature					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remark	KS
0-8	10YR 3/2	100					Sandy		
8-16	7.5YR 4/4	100					Sandy		
17			No december 1 Martinia 1 M	40. 14			21	- I in in NA . NA - A	
Hydric Soil I	ncentration, D=Deple	tion, RIVI=F	Reduced Matrix, N	/IS=IVIASI	ked Sand	Grains.	² Location: PL=Pore		
Histosol (Dark Surface (S7)			2 cm Muck (A1	-	
	pedon (A2)	_	Polyvalue Belo		ce (S8) (I	RR R	Coast Prairie R		
Black His		_	MLRA 149B		00 (00) (1			eat or Peat (S3)	-
	Sulfide (A4)		Thin Dark Surf	,	(LRR R,	MLRA 1		w Surface (S8)	
	Layers (A5)	_	— High Chroma S		-		Thin Dark Surfa		•
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Manganes	e Masses (F12)	(LRR K, L, R)
Thick Dar	rk Surface (A12)	_	 Loamy Gleyed	Matrix (I	F2)		Piedmont Floor	dplain Soils (F19	9) (MLRA 149B)
Mesic Sp	odic (A17)	_	_ Depleted Matri	x (F3)			Red Parent Ma	terial (F21) (ou t	tside MLRA 145)
(MLRA	A 144A, 145, 149B)	_	_ Redox Dark Su	urface (F	6)		Very Shallow D	ark Surface (F2	22)
	ucky Mineral (S1)	_	Depleted Dark				Other (Explain	in Remarks)	
	eyed Matrix (S4)	_	_Redox Depress	-	3)		3, ,, ,		
Sandy Re		_	Marl (F10) (LR		04) (84) E	A 445\	³ Indicators of h		
Stripped i	Matrix (S6)	_	_ Red Parent Ma	ateriai (F.	21) (WILK	(A 145)	•	ology must be p bed or problema	
Restrictive I	ayer (if observed):						uniess distai	bed of problems	auc.
Type:	ayer (ii observea).								
Depth (in	ches).						Hydric Soil Present?	Yes	No X
							Tryunc don't resent:		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Chesterton / Porter County Sampling Date: 5/27/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P26				
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 of SW 1/4 S17 T37N R5W				
	relief (concave, convex, none): none Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 98 Lat: 41.652254	Long: -87.024137 Datum: NAD83				
Soil Map Unit Name: OaC - Oakville fine sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrology naturally problems	<u></u>				
SUMMARY OF FINDINGS – Attach site map showing sam					
The decided to Versate for December 1	In the Committed Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	,00,				
Point is in a depressional wetland that shows signs of recent inundation.					
, , , , , , , , , , , , , , , , , , ,					
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) X Water-Stained Leaves (I	(B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	X Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
X Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Inc.	Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	rks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes X No Depth (inches):	4				
Saturation Present? Yes X No Depth (inches):	1 Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

T 01 1 (DI 1 : 00)	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:			
Fraxinus pennsylvanica	10	No	FACW	Number of Dominant Species			
2. Acer rubrum	65	Yes	FAC	That Are OBL, FACW, or FAC: 4 (A)			
3. Populus deltoides	15	No	FAC	Total Number of Dominant			
4				Species Across All Strata: 5 (B)			
5				Percent of Dominant Species			
6				That Are OBL, FACW, or FAC: 80.0% (A/B)			
7.				Prevalence Index worksheet:			
	90	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 20)				OBL species 38 x 1 = 38			
1. Lindera benzoin	25	Yes	FACW	FACW species 60 x 2 = 120			
2. Rosa multiflora	30	Yes	FACU	FAC species 85 x 3 = 255			
3. Euonymus alatus	15	No	UPL	FACU species 40 x 4 = 160			
4. Quercus alba	7	No	FACU	UPL species 15 x 5 = 75			
5.				Column Totals: 238 (A) 648 (B)			
6				Prevalence Index = B/A = 2.72			
7.				Hydrophytic Vegetation Indicators:			
···	77	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		10101 00101		X 2 - Dominance Test is >50%			
Osmunda spectabilis	30	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹			
Onoclea sensibilis	15	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting			
Solidago gigantea	10	No	FACW	data in Remarks or on a separate sheet)			
4. Glyceria striata	5	No No	OBL	- Problematic Hydrophytic Vegetation ¹ (Explain)			
	5		FAC	Froblematic Hydrophytic Vegetation (Explain)			
5. Carex blanda		No No		¹ Indicators of hydric soil and wetland hydrology must			
6. Juncus effusus	3	No	OBL	be present, unless disturbed or problematic.			
7. Potentilla simplex	3	<u>No</u>	FACU	Definitions of Vegetation Strata:			
8				Tree – Woody plants 3 in. (7.6 cm) or more in			
9				diameter at breast height (DBH), regardless of height.			
10				Sapling/shrub – Woody plants less than 3 in. DBH			
11				and greater than or equal to 3.28 ft (1 m) tall.			
12				Herb – All herbaceous (non-woody) plants, regardless			
	71	=Total Cover		of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in			
1				height.			
2.							
3.				Hydrophytic Vegetation			
4.				Present? Yes X No			
		=Total Cover					
Remarks: (Include photo numbers here or on a separ	ate sheet)						
Tromaine: (molade priote flambore flore of off a copar	ato 01100ti.)						

Sampling Point: P26

Profile Desc Depth	ription: (Describe to Matrix	the de		ıment t l x Featur		ator or co	onfirm the absence of indicat	iors.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 2/1	100					Mucky Sand		
4-14	10YR 2/1	95	10YR 4/4	5	С	М	Sandy		
14-20	10YR 6/1	80	10YR 3/2	20	D	m	Sandy		
17			A. De desert Matrice A				21	Links at NA NA-Asia	
Hydric Soil I	ncentration, D=Deple	tion, Ki	/I=Reduced Matrix, N	15=IVIas	ked San	d Grains.	² Location: PL=Pore I	ematic Hydric Soils ³ :	
Histosol			Dark Surface (S7)) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Belo	-	ce (S8) (LRR R,		dox (A16) (LRR K, L, R)	
Black His	stic (A3)		MLRA 149B)			5 cm Mucky Pea	t or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa					Surface (S8) (LRR K, L)	
	Layers (A5)		High Chroma S					e (S9) (LRR K, L)	
	Below Dark Surface	(A11)	Loamy Mucky I			RK,L)		Masses (F12) (LRR K, L, R)	
	rk Surface (A12)		Loamy Gleyed		F2)			olain Soils (F19) (MLRA 149B	
	oodic (A17)		Depleted Matrix		·6)			erial (F21) (outside MLRA 14)	
	A 144A, 145, 149B) ucky Mineral (S1)		Redox Dark Su Depleted Dark				Very Shallow Dark Surface (F22) Other (Explain in Remarks)		
	leyed Matrix (S4)		Redox Depress		` '		Other (Explain in	(Normanio)	
X Sandy R			Marl (F10) (LR	-	-,		³ Indicators of hydrophytic vegetation and		
	Matrix (S6)		Red Parent Ma		21) (ML I	RA 145)	wetland hydrology must be present,		
							unless disturbe	ed or problematic.	
	_ayer (if observed):								
Type: _								V V N	
Depth (in	icnes):						Hydric Soil Present?	Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Chesterton / Porter County Sampling Date: 5/27/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P27
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 of SW 1/4 S17 T37N R5W
· · · · · · · · · · · · · · · · · · ·	relief (concave, convex, none): none Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 98 Lat: 41.653131	Long: -87.024300 Datum: NAD83
Soil Map Unit Name: Mm - Maummee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrologysignificantly distu	
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 16
Remarks: (Explain alternative procedures here or in a separate report.)	1
Point Is in a forested wetland with a shrubby understory dominated by holl	ly trees.
L 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) X Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) — Aquatic Fatha (B15) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Water Marks (B1) Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Sediment Deposits (B2) Oxidized Rhizospheres	· / · · · · · · · · · · · · · · · · · ·
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4) Recent Iron Reduction i	
Iron Deposits (B5) Thin Muck Surface (C7)	· / — · · / /
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	· · · · · · · · · · · · · · · · · · ·
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
	,
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P27

	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Ilex opaca	10	No	FACU	Number of Dominant Species			
2. Nyssa sylvatica	20	Yes	FAC	That Are OBL, FACW, or FAC:3 (A)			
3. Acer saccharum	70	Yes	FACU	Total Number of Dominant			
4.				Species Across All Strata: 4 (B)			
5.				``			
•				Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)			
7				` ` /			
7				Prevalence Index worksheet:			
	100	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size:)				OBL species10 x 1 =10			
1				FACW species 75 x 2 = 150			
2				FAC species 20 x 3 = 60			
3				FACU species80 x 4 =320			
4.				UPL species 0 x 5 = 0			
5.				Column Totals: 185 (A) 540 (B)			
6				Prevalence Index = B/A = 2.92			
<u> </u>				Hydrophytic Vegetation Indicators:			
7		=Total Cover					
		= rotal Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)				X 2 - Dominance Test is >50%			
1. Fraxinus pennsylvanica	30	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹			
2. Onoclea sensibilis	45	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting			
3. Osmunda spectabilis	10	No	OBL	data in Remarks or on a separate sheet)			
4				Problematic Hydrophytic Vegetation ¹ (Explain)			
5.				¹ Indicators of hydric soil and wetland hydrology must			
6				be present, unless disturbed or problematic.			
7.				Definitions of Vegetation Strata:			
9							
0				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
·				diameter at breast height (DDH), regardless of height.			
10.				Sapling/shrub – Woody plants less than 3 in. DBH			
11				and greater than or equal to 3.28 ft (1 m) tall.			
12				Herb – All herbaceous (non-woody) plants, regardless			
	85	=Total Cover		of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in			
1				height.			
2.							
3.				Hydrophytic Vegetation			
4.				Present? Yes X No			
		=Total Cover					
Demonstrate (Include whether numbers have an an an arrange	-414\	- Total Cover					
Remarks: (Include photo numbers here or on a separ	ate sneet.)						

Profile Desc Depth	ription: (Describe to Matrix	o the de		u <mark>ment th</mark> x Feature		ator or co	onfirm the absence of i	dicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/1	100					Sandy		
6-15	10YR 2/2	95	10YR 4/3	5	С	M	Sandy		
15-20	10YR 2/2	80	10YR 4/3	20	С	m	Sandy	Faint redox concentrations	
¹ Type: C=Co	ncentration, D=Deple	etion, RN	/I=Reduced Matrix, N	/IS=Mas	ked Sand	d Grains.	² Location: PL=	=Pore Lining, M=Matrix.	
Hydric Soil I								Problematic Hydric Soils ³ :	
— Histosol (X Dark Surface (-	(00) ((A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Belo MLRA 149B		ce (S8) (LKK K,		rie Redox (A16) (LRR K, L, R)	
Black His	n Sulfide (A4)		Thin Dark Surfa	,	(I RR R	MI RA 1		ky Peat or Peat (S3) (LRR K, L, R) Below Surface (S8) (LRR K, L)	
	Layers (A5)		High Chroma S					Surface (S9) (LRR K, L)	
	Below Dark Surface	(A11)	Loamy Mucky I				Iron-Manganese Masses (F12) (LRR K, L, R)		
Thick Da	rk Surface (A12)		Loamy Gleyed	Matrix (F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	odic (A17)		Depleted Matrix				Red Parent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		Redox Dark Su				Very Shallow Dark Surface (F22) Other (Explain in Remarks)		
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark Redox Depress				— Other (Exp	nam m Remarks)	
	edox (S5)		Marl (F10) (LR	•	<i>5</i> ,		³ Indicators of hydrophytic vegetation and		
	Matrix (S6)		Red Parent Ma		21) (ML F	RA 145)	wetland hydrology must be present,		
							unless d	listurbed or problematic.	
	.ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present	? Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway/ Teale Dr,	City/County: Chesterton / Porter County Sampling Date: 5/27/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P28				
Investigator(s): B. McQuestion, D. James	Section, Township, Range: SW 1/4 of SW 1/4 S17 T37N R5W				
	relief (concave, convex, none): convex				
Subregion (LRR or MLRA): LRR L, MLRA 98 Lat: 41.653601	Long: -87.024399 Datum: NAD83				
Soil Map Unit Name: Mm - Maummee loamy sand	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No _X_	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_				
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
Point was taken from an upland ridge west of Teale Dr.					
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) Water-Stained Leaves (I	(B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro	ron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes No _X_				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
remaile.					

VEGETATION – Use scientific names of plants. Sampling Point: P28 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** FAC 1. Acer rubrum Yes Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 25.0% (A/B) Prevalence Index worksheet: 80 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 0 x 2 = 1. llex opaca 45 Yes FACU 0 2. Amelanchier alnifolia **FACU** FAC species 80 x 3 = 240 3. Rosa multiflora 30 Yes **FACU** FACU species 117 x 4 = 468 4. Sassafras albidum 10 No **FACU** UPL species 45 x 5 = 225 5. Column Totals: 242 933 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation 100 =Total Cover Herb Stratum (Plot size: 2 - Dominance Test is >50% Parthenocissus quinquefolia **FACU** 3 - Prevalence Index is ≤3.01 No **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Potentilla simplex data in Remarks or on a separate sheet) 45 __ _ 3. Vinca minor UPL 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 62 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	ription: (Describe t	o the de	oth needed to docu	ıment tl	he indica	tor or co	onfirm the absence of ind	cators.)		
Depth	Matrix			κ Featur	es					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	10YR 5/3	100					Sandy			
6-12	10YR 5/6	90	10YR 4/6	5	C	M	Sandy			
			10YR 5/6	5	<u>C</u>	M		Faint redox concentrations		
12-20	7.5YR 5/8	100								
	ncentration, D=Deple	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.		re Lining, M=Matrix.		
Hydric Soil I			D - 1 0 0 - 4 (1	371				oblematic Hydric Soils ³ :		
— Histosol (Dark Surface (-	aa (CO) (I	DD D		.10) (LRR K, L, MLRA 149B)		
Black His	ipedon (A2)		Polyvalue Belo MLRA 149B		ce (So) (I	LKK K,		Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Thin Dark Surfa		(I RR R	MI RA 1		ow Surface (S8) (LRR K, L)		
	Layers (A5)		High Chroma S					face (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky I					ese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)	()	Loamy Gleyed			, -,		odplain Soils (F19) (MLRA 149B)		
	oodic (A17)		Depleted Matrix		,		Red Parent Material (F21) (outside MLRA 145			
(MLR	A 144A, 145, 149B)		Redox Dark Su	rface (F	⁻ 6)		Very Shallow Dark Surface (F22)			
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Explain in Remarks)			
Sandy Gl	leyed Matrix (S4)		Redox Depress	ions (F	8)					
	edox (S5)		Marl (F10) (LR				³ Indicators of hydrophytic vegetation and			
Stripped	Matrix (S6)		Red Parent Ma	terial (F	21) (MLF	RA 145)	wetland hydrology must be present,			
Dootwietius I							unless dist	urbed or problematic.		
Type:	.ayer (if observed):									
Depth (in	chos):						Hydric Soil Present?	Vos No Y		
							nyunc 3011 Fresent!	Yes No _X_		
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P29
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W
·	relief (concave, convex, none): Concave Slope %: 1
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.654515	Long: -87.026 Datum: NAD83
Soil Map Unit Name: OaC - Oakville fine sand	NWI classification: R5UBFx
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly distur-	
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Was V Na	
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	within a Wetland? Yes X No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	II you, optional resident cito is:
This is an interdunal wetland. This portion is forested and dominated by pi	in oak. red maple, and eastern cottonwood. There was Ricciocarpos (a
liverwort) at the water's edge.	, ,
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) X Water-Stained Leaves (I	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
(5 5)	γ
Remarks:	
This point is at the north end of the interdunal wetland at the base of a dun	ne slope.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:
Quercus palustris	60	Yes	FACW	Number of Dominant Species
2. Acer rubrum	20	No	FAC	That Are OBL, FACW, or FAC:8 (A)
3. Populus deltoides	25	Yes	FAC	Total Number of Dominant
4.				Species Across All Strata: 8 (B)
5.				
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
<i>1.</i>	105	=Total Cover		
0 1: (01 1 01 1 (17) 1	105	- Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)				OBL species35 x 1 =35
Cephalanthus occidentalis	15	Yes	OBL	FACW species 79 x 2 = 158
2. Fraxinus pennsylvanica	5	Yes	FACW	FAC species46 x 3 =138
3				FACU species 0 x 4 = 0
4				UPL species0 x 5 =0
5				Column Totals: 160 (A) 331 (B)
6.				Prevalence Index = B/A = 2.07
7.				Hydrophytic Vegetation Indicators:
	20	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		- Total Cover		X 2 - Dominance Test is >50%
·	_			I— , I
1. Carex grayi	5	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. <u>Iris virginica</u>	3	No	OBL	4 - Morphological Adaptations (Provide supporting
3. Bidens frondosa	3	No	FACW	data in Remarks or on a separate sheet)
4. Carex scoparia	5	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Toxicodendron radicans	1	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
6. Boehmeria cylindrica	2	No	OBL	be present, unless disturbed or problematic.
7. Lysimachia terrestris	7	Yes	OBL	Definitions of Vegetation Strata:
8. Sium suave	5	Yes	OBL	
9. Carex lacustris	3	No No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10. Quercus palustris	1	No	FACW	
<u> </u>			TAOW	Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	35	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				
3				Hydrophytic Vegetation
4.				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet)	•		
Ricciocarpos at the water's edge.	ato oncot.)			
				ı

Sampling Point: P29

Profile Desc Depth	cription: (Describe to Matrix	the de	-	cument t l ox Featur		ator or c	onfirm the absence of indicators	.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/2	100					Mucky Sand	
4-10	10YR 3/2	100					Sandy	
10-16	10YR 5/2	100					Sandy	
17			A Deduced Metric				21 tion - DI - Dono I into	NA . NA strike
Hydric Soil	oncentration, D=Deple	tion, Ri	/I=Reduced Matrix,	MS=Mas	ked Sand	d Grains.	² Location: PL=Pore Linir Indicators for Problema	•
Histosol			Dark Surface	(S7)				RR K, L, MLRA 149B)
— Histic Ep	pipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (LRR R,	Coast Prairie Redox	
Black Hi	stic (A3)		MLRA 1498	В)			5 cm Mucky Peat or	Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Thin Dark Sur				149B) Polyvalue Below Sur	face (S8) (LRR K, L)
Stratified	d Layers (A5)		High Chroma	Sands (S	611) (LR I	R K, L)	Thin Dark Surface (S	39) (LRR K, L)
Depleted	d Below Dark Surface	(A11)	Loamy Mucky	/ Mineral	(F1) (LR	RK,L)	Iron-Manganese Mas	sses (F12) (LRR K, L, R)
	ark Surface (A12)		Loamy Gleye	-	(F2)			Soils (F19) (MLRA 149B)
	podic (A17)		Depleted Mate		-0)			(F21) (outside MLRA 145)
	A 144A, 145, 149B)		Redox Dark S				Very Shallow Dark S	
	Mucky Mineral (S1)		Depleted Dark		` '		Other (Explain in Re	marks)
	Sleyed Matrix (S4) Ledox (S5)		Redox Depres Marl (F10) (LI	-	0)		³ Indicators of hydrop	bytic vocatation and
	Matrix (S6)		Red Parent M		(21) (M L	DA 145\	wetland hydrology	-
ottipped	Wattix (OO)		ited i aleitivi	iateriai (i	21) (IVILI	(A 140)	unless disturbed o	
	Layer (if observed):							
Type:								
Depth (ir	nches):						Hydric Soil Present?	YesX No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P30				
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W				
	relief (concave, convex, none): Concave Slope %: 5				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.654633	Long: -87.026082 Datum: NAD83				
Soil Map Unit Name: OaC - Oakville fine sand,	NWI classification: None				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly distur-					
	· · · · · · · · · · · · · · · · · · ·				
Are Vegetation, Soil, or Hydrologynaturally problem					
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No_X_	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_				
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	4				
This point is on a forested dune slope above wetland 15. Dominated by re	d oak and white pine.				
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) Water-Stained Leaves (_				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor					
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Ir					
Algal Mat or Crust (B4) Recent Iron Reduction i	in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No Depth (inches):	r.				
Water Table Present? Yes No Depth (inches):					
Saturation Present? Yes No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:				
Remarks:					
I					

T 0/ / (D) / (D)	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Sassafras albidum	30	Yes	FACU	Number of Dominant Species
2. Acer rubrum	15	Yes	FAC	That Are OBL, FACW, or FAC:3 (A)
3				Total Number of Dominant
4.				Species Across All Strata: 12 (B)
5.				
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
7.				Prevalence Index worksheet:
·	 45	=Total Cover		Total % Cover of: Multiply by:
Carolina (Charolina Charolina (Diataina 20	45	- Total Cover		
Sapling/Shrub Stratum (Plot size: 20)			5.0 00	
1. Morus alba	3	No	FACU	FACW species 7 x 2 = 14
2. Fraxinus pennsylvanica	7	No	FACW	FAC species34 x 3 =102
3. Elaeagnus umbellata	30	Yes	UPL	FACU species194 x 4 =776
4. Sassafras albidum	25	Yes	FACU	UPL species40 x 5 =200
5. Lonicera X bella	30	Yes	FACU	Column Totals: 275 (A) 1092 (B)
6. Rubus allegheniensis	10	No	FACU	Prevalence Index = B/A = 3.97
7.				Hydrophytic Vegetation Indicators:
	105	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)				2 - Dominance Test is >50%
Pteridium aquilinum	5	No	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Carex pensylvanica	10	Yes	UPL_	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. <u>Dichanthelium implicatum</u>	7	Yes	FAC	, , ,
4. Osmorhiza claytonii	10	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Geum canadense	5	<u>No</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must
6. Robinia pseudoacacia	3	No	FACU	be present, unless disturbed or problematic.
7. Galium aparine	5	No	FACU	Definitions of Vegetation Strata:
8. Maianthemum stellatum	7	Yes	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Tradescantia ohiensis	5	No	FACU	diameter at breast height (DBH), regardless of height.
10. Rubus flagellaris	10	Yes	FACU	Continuo la handa de la contra la co
11. Botrypus virginianus	1	No	FACU	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12. Glechoma hederacea	5	No	FACU	
12. Glechoma neueracea			TACO	Herb – All herbaceous (non-woody) plants, regardless
Was do Vine Otestone (Diet size 90)	73	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)				Woody vines – All woody vines greater than 3.28 ft in
Celastrus orbiculatus	30	Yes	FACU	height.
2. Vitis labrusca	15	<u>Yes</u>	<u>FACU</u>	Hydrophytic
3. Parthenocissus quinquefolia	7	No	FACU	Vegetation
4				Present?
	52	=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Sampling Point: P30

VEGETATION Continued – Use scientific names of plants. Sampling Point: P30 Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 45 =Total Cover Sapling/Shrub Stratum 9. _____ 105 =Total Cover Herb Stratum 21. 73 =Total Cover Woody Vine Stratum 7. 52 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument t	he indica	tor or co	onfirm the absence of indica	ators.)	
Depth	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 4/3	100					Sandy		
8-18	10YR 5/6	100					Sandy		
1			L Dadina d Matrica	10. 14.			21 + i	Links A Madeir	
Hydric Soil I	ncentration, D=Deple	etion, Riv	I=Reduced Matrix, N	vi5=ivias	sked Sand	Grains.	² Location: PL=Pore		
Histosol			Dark Surface ((S7))) (LRR K, L, ML	
	ipedon (A2)		Polyvalue Belo		ce (S8) (I	RR R	•	edox (A16) (LRR	•
Black His			MLRA 149B		() (.			at or Peat (S3) (L	-
	n Sulfide (A4)		Thin Dark Surf	,) (LRR R	MLRA 1		v Surface (S8) (L	
	Layers (A5)		High Chroma S					ce (S9) (LRR K ,	
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LR	R K, L)	Iron-Manganese	e Masses (F12) (l	LRR K, L, R)
Thick Da	rk Surface (A12)		Loamy Gleyed	Matrix ((F2)		Piedmont Flood	plain Soils (F19)	(MLRA 149B)
	oodic (A17)		Depleted Matri					erial (F21) (outs i	
	A 144A, 145, 149B)		Redox Dark Su	-	-			ark Surface (F22))
	ucky Mineral (S1)		Depleted Dark				Other (Explain i	n Remarks)	
	leyed Matrix (S4) edox (S5)		Marl (F10) (LR		0)		3Indicators of by	drophytic vegeta	tion and
	Matrix (S6)		Red Parent Ma		21) (MI F	PA 145)		ology must be pre	
	maan (GG)			atoriai (i	/ (_ .	,		ped or problemati	
Restrictive L	ayer (if observed):							'	
Type:	,								
Depth (in	ches):						Hydric Soil Present?	Yes	No X
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P31				
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W				
·	relief (concave, convex, none): Concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.654745	Long: -87.025408 Datum: NAD83				
Soil Map Unit Name: OaE - Oakville fine sand	NWI classification: R5UBFx				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly distur-					
Are Vegetation, Soil, or Hydrology naturally problems	· — —				
SUMMARY OF FINDINGS – Attach site map showing sam					
Undershidia Vagatatian Dragant? Vag. V. No.	Is the Compled Area				
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 14				
Remarks: (Explain alternative procedures here or in a separate report.)					
· · · · · · · · · · · · · · · · · · ·	tland with a sedge understory. Other areas are dominated by common reed.				
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)Water-Stained Leaves (B	B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Recent Iron Reduction in	in Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)					
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No Depth (inches):					
Water Table Present? Yes X No Depth (inches):					
Saturation Present? Yes X No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

	nts.			Sampling Point: P31
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Fraxinus pennsylvanica	50	Yes	FACW	Number of Dominant Species
2. Acer saccharinum	10	No	FACW	That Are OBL, FACW, or FAC:6 (A)
3. Quercus palustris	30	Yes	FACW	Total Number of Dominant
l.				Species Across All Strata: 6 (B)
5.				Percent of Dominant Species
).				That Are OBL, FACW, or FAC: 100.0% (A/B
·				Prevalence Index worksheet:
	90	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)		•		OBL species 86 x 1 = 86
. Cephalanthus occidentalis	10	Yes	OBL	FACW species 98 x 2 = 196
2. Fraxinus pennsylvanica	5	Yes	FACW	FAC species 3 x 3 = 9
3.				FACU species 0 x 4 = 0
				UPL species 0 x 5 = 0
· i.				Column Totals: 187 (A) 291 (B
3.				Prevalence Index = B/A = 1.56
-				
·	 15	=Total Cover		Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
Jork Stratum (Plataiza: 10)		- Total Cover		1
Herb Stratum (Plot size:10)	20	Vaa	OBL	X 2 - Dominance Test is >50%
. Carex lupulina	30	Yes No	OBL	X 3 - Prevalence Index is ≤3.0 ¹
2. Sium suave	10	No No	OBL	4 - Morphological Adaptations ¹ (Provide supportindata in Remarks or on a separate sheet)
3. Carex lurida	20	Yes	OBL	
Boehmeria cylindrica	3	No No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Impatiens capensis	3	No No	FACW	¹ Indicators of hydric soil and wetland hydrology must
6. Galium palustre	5	No No	OBL	be present, unless disturbed or problematic.
Carex stipata	5	No No	OBL	Definitions of Vegetation Strata:
3. Scutellaria lateriflora	3	No No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in
D. Toxicodendron radicans	3	No	<u>FAC</u>	diameter at breast height (DBH), regardless of height
0				Sapling/shrub – Woody plants less than 3 in. DBH
1				and greater than or equal to 3.28 ft (1 m) tall.
2				Herb – All herbaceous (non-woody) plants, regardles
	82	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
·				height.
<u> </u>				Hydrophytic
3				Vegetation
				Present?
l				

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Turnibure Remarks	Profile Descr	ription: (Describe to	the depth nee				tor or co	onfirm the absence of	indicators.)	
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains." "Location: PL=Pore Lining, M=Matrix. "Location: PL=Pore Lining, M=Matrix. "Location: PL=Pore Lining, M=Matrix. "Location: PL=Pore Lining, M=Matrix. "Indicators for Problematic Hydric Soils": 2 cm Muck (A10) (LRR K, L, MLRA 1998) Hydric Soil Indicators: Hydric Soil Indicators: Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, BRA 1498) Thin Dark Surface (S9) (LRR R, MLRA 1498) Thin Dark Surface (S9) (LRR R, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A16) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Followate Redox (A10) (LRR K, L, R) F	Depth					- 1				
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydroen Sulfide (A4) Thin Dark Surface (S9) (LRR R, Black Histic (A3) Hydroen Sulfide (A4) Straffied Layers (A5) Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Red Parent Material (F21) (MLRA 145) Sandy Red Parent Material (F21) (MLRA 145) Sandy Mucky Mineral (S1) Sandy Mucky Mineral ((inches)	Color (moist)	<u> </u>	or (moist)		Type '	Loc ²	Texture	Ren	narks
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	0-20	10YR 2/2	95 10	YR 4/4	5	С	M	Sandy	Distinct redox	concentrations
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Depleted Matrix (F3) Mesc Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Marl (F10) (LRR K, L) Restrictive Layer (if observed): Type: Depth (inches): Higtosor Surface (S7) Dark Surface (S9) (LRR R, MLRA 149B) Dark Surface (S9) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Scrudified Layer (if observed): Type: Depth (inches): Indicators for Problematic Hydric Soils ? Problematic Hydric Soils ? 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Scrudified Layer (S9) (LRR K, L, R) Loamy Glevo Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S9) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (F9) (LRR K, L,										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Depleted Matrix (F3) Mesc Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Marl (F10) (LRR K, L) Restrictive Layer (if observed): Type: Depth (inches): Higtosor Surface (S7) Dark Surface (S9) (LRR R, MLRA 149B) Dark Surface (S9) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Scrudified Layer (if observed): Type: Depth (inches): Indicators for Problematic Hydric Soils ? Problematic Hydric Soils ? 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Scrudified Layer (S9) (LRR K, L, R) Loamy Glevo Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S9) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (F9) (LRR K, L,										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										
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Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A77) Mesic Spodic (A77) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	¹ Type: C=Co	ncentration. D=Deple	tion. RM=Redu	ced Matrix. M	IS=Mask	ced Sand	Grains.	² Location: PL	_=Pore Lining. M=	Matrix.
Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144B, 145, 149B) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Histosod (A1) Polyvalue Below Surface (S9) (LRR K, L, R) Coast Prairie Redox (A10) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Scom Mucky Peat or Peat (S3) (LRR K, L, R) For Mucky Peat or Peat (S3) (LRR K, L) For Mucky Peat or Peat (S3) (LRR K, L) For Mucky Peat or Peat (S3) (LRR K, L) For Mucky Peat or Peat (S3) (LRR K, L) For Mucky Peat or Peat (S3) (LRR K, L) For Mucky Peat or Peat (S3) (LRR K, L) For Mucky			,	,						
Histic Epipedon (A2)	-		Da	ark Surface (S	S7)				-	
Black Histic (A3) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) [MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Marl (F10) (LRR K, L) Mestrictive Layer (if observed): Type: Depth (inches): MIRA 149B) MIRA 149B) Stripped Matrix (A12) MIRA 149B) Stripped Matrix (S6) MIRA 149B) MIRA 149B) Medox Depressions (F8) Matrix (F2) Matrix (F2) Matrix (F2) MIRA 149B) MIRA 149B) Medox Depressions (F8) Matrix (F3) Matrix (F2) Matrix (F2) Matrix (F2) MIRA 149B) Matrix (F2) Matrix (F2) MIRA 149B) Medox Depressions (F8) Matrix (F2) Matrix (F2) MIRA 149B) Medox Depressions (F8) Matrix (F2) Matrix (F2) MIRA 149B) Medox Depressions (F8) Matrix (F2) Matrix (F2) MIRA 149B) Medox Depressions (F8) Matrix (F2) Matrix (F2) Matrix (F2) Mira (F10) (LRR K, L) Matrix (F2) Medox Depressions (F8) Medox Depressions (F8) Medox Depressions (F8) Matrix (F2) Medox Depressions (F8) Medox Depress		•			-	ce (S8) (I	LRR R,			
Hydrogen Sulfide (A4) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Depleted Below Dark Surface (A11) Thin Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Marl (F21) (MLRA 145) Marl (F21) (MLRA 145) Marl (F21) (MLRA 145) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No				-		. , .		5 cm Mud	cky Peat or Peat (S3) (LRR K, L, R)
Stratified Layers (A5)			Th	in Dark Surfa	ace (S9)	(LRR R	MLRA 1			
Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (outside MLRA 145) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (outside MLRA 145) Very Shallow Dark Surface (F22) Other (Explain in Remarks) All 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 X No						-			· · · · · · · · · · · · · · · · · · ·	
Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (outside MLRA 145) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Depleted	Below Dark Surface	(A11)Lo	amy Mucky N	Mineral (F1) (LRI	R K, L)	Iron-Man	ganese Masses (F	12) (LRR K, L, R)
(MLRA 144A, 145, 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Gleyed Matrix (S4) Redox Depressions (F8) X Sandy Redox (S5) Marl (F10) (LRR K, L) 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 X No	Thick Dar	k Surface (A12)	Lc	amy Gleyed	Matrix (F	- 2)		Piedmon	t Floodplain Soils ((F19) (MLRA 149B)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Depleted Dark Surface (F7) Other (Explain in Remarks) All (F10) (LRR K, L) SIndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No	Mesic Sp	odic (A17)	De	epleted Matrix	k (F3)			Red Pare	ent Material (F21) (outside MLRA 145)
Sandy Gleyed Matrix (S4) X Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No	(MLRA	A 144A, 145, 149B)	Re	edox Dark Su	rface (F	6)		Very Sha	llow Dark Surface	(F22)
X Sandy Redox (S5)	Sandy Mu	ucky Mineral (S1)	De	epleted Dark	Surface	(F7)		Other (Ex	ιρlain in Remarks)	
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Sandy Gl	eyed Matrix (S4)	Re	edox Depress	ions (F8	3)				
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	X Sandy Re	edox (S5)	Ma	arl (F10) (LR I	R K, L)			³ Indicator	rs of hydrophytic ve	egetation and
Restrictive Layer (if observed): Type:	Stripped I	Matrix (S6)	Re	ed Parent Ma	terial (F2	21) (MLF	RA 145)	wetland	d hydrology must b	pe present,
Type:								unless	disturbed or proble	ematic.
Depth (inches): Hydric Soil Present? Yes X No		ayer (if observed):								
	Type: _			_						
Remarks:	Depth (inc	ches):		_				Hydric Soil Presen	t? Yes	X No
	Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P32
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W
	I relief (concave, convex, none): Convex Slope %:
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.654697	Long: -87.025525 Datum: NAD83
Soil Map Unit Name: OaE - Oakville fine sand	NWI classification: None
· -	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distu	
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present?	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This point is in the gravel road bed of Teale Drive. Dominated by exotic sp	pecies.
,	
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) Water-Stained Leaves	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches))·
Water Table Present? Yes No x Depth (inches)	·
Saturation Present? Yes No x Depth (inches)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
5 , , , , , , , , , , , , , , , , , , ,	1011040 1102000107, 11 21 21 21 21
Remarks:	

Absolute	Dominant	Indicator	
% Cover	Species?	Status	Dominance Test worksheet:
20	Yes	FACU	Number of Dominant Species
			That Are OBL, FACW, or FAC:1 (A)
			Total Number of Dominant
			Species Across All Strata: 7 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC:14.3%(A/B)
			Prevalence Index worksheet:
20	=Total Cover		Total % Cover of: Multiply by:
	•		OBL species 0 x 1 = 0
7	Yes	FACU	FACW species 3 x 2 = 6
			FAC species 23 x 3 = 69
			FACU species 96 x 4 = 384
			UPL species 5 x 5 = 25
			Column Totals: 127 (A) 484 (B)
			Prevalence Index = B/A = 3.81
			Hydrophytic Vegetation Indicators:
7	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
7	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
3	No	FACU	4 - Morphological Adaptations ¹ (Provide supportin
3	No	FACW	data in Remarks or on a separate sheet)
5	Yes	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
3	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
5	Yes	FACU	be present, unless disturbed or problematic.
3	No	FAC	Definitions of Vegetation Strata:
7	Yes	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in
3	No	FAC	diameter at breast height (DBH), regardless of height
1	No	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
3	No	FACU	and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardles:
43	=Total Cover		of size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in
50	Yes	FACU	height.
7	No	FAC	
			Hydrophytic
			l Vegetation
			Vegetation Present? Yes NoX
	20 7 7 7 7 3 3 5 3 5 3 7 3 1 3	20 Yes 20 =Total Cover 7 Yes 7 Yes 3 No 5 Yes 3 No 5 Yes 3 No 7 Yes 3 No 7 Yes 3 No 1 No 3 No 43 =Total Cover	20 Yes

		the depth i				tor or co	onfirm the absence of	indicators.)	
Depth	Matrix			x Feature		. 2		_	
(inches)	Color (moist)	<u></u> % _ C	Color (moist)		Type ¹	Loc ²	Texture	Rema	irks
0-16								Grave	l fill
¹ Type: C=Co	ncentration, D=Deple	tion, RM=Re	duced Matrix, I	MS=Masl	ked Sand	Grains.	² Location: PL:	=Pore Lining, M=Ma	atrix.
Hydric Soil I	ndicators:						Indicators for	Problematic Hydr	ric Soils³:
Histosol (A1)		Dark Surface				2 cm Mucl	k (A10) (LRR K, L,	MLRA 149B)
Histic Epi	pedon (A2)		Polyvalue Belo	ow Surfac	ce (S8) (I	RR R,	Coast Pra	irie Redox (A16) (L	RR K, L, R)
Black His			MLRA 149E	,				ky Peat or Peat (S3	
	Sulfide (A4)		Thin Dark Sur					Below Surface (S8	
	Layers (A5)		.High Chroma					Surface (S9) (LRR	· ·
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)		anese Masses (F12	
	rk Surface (A12)		Loamy Gleyed	-	F2)			Floodplain Soils (F	
	odic (A17)		Depleted Matr					nt Material (F21) (o	
	A 144A, 145, 149B)		Redox Dark S					low Dark Surface (F	-22)
	ucky Mineral (S1)		Depleted Dark				Other (Exp	olain in Remarks)	
	eyed Matrix (S4)		Redox Depres	-	5)		31		4 . 4
Sandy Re			Marl (F10) (LF		24) /8/1 5	A 44E\		s of hydrophytic veg hydrology must be	
Stripped	Matrix (S6)		Red Parent Ma	ateriai (F.	∠ 1) (IVILF	(A 145)		nydrology must be disturbed or problen	•
Postrictivo I	ayer (if observed):						uniess c	disturbed of problem	nauc.
Type:	ayer (ii observeu).								
-									
Depth (in	cnes):						Hydric Soil Present	? Yes	No <u>X</u>
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P33				
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W				
Landform (hillside, terrace, etc.): swale Local	relief (concave, convex, none): Convex Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.662253	Long: -87.011199 Datum: NAD83				
Soil Map Unit Name: Mm - Maumee loamy sand	NWI classification: None				
Are climatic / hydrologic conditions on the site typical for this time of year?					
Are Vegetation, Soil, or Hydrologysignificantly distur					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 12				
Remarks: (Explain alternative procedures here or in a separate report.)					
This wetland is a small swale between highway 12 to the north and wetlan	d 11 to the soutth.				
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) Water-Stained Leaves (B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) — Oxidized Rhizospheres					
Drift Deposits (B3) Presence of Reduced Ir	ron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction i	in Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)) Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	rks) X Microtopographic Relief (D4)				
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No x Depth (inches):	:				
Water Table Present? Yes x No Depth (inches):					
Saturation Present? Yes x No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:				
, , , , , , , , , , , , , , , , , , , ,					
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P33

<u>Tree Stratum</u> (Plot size: <u>Entire Wetland</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. 2.				Number of Dominant Species That Are OBL, FACW, or FAC:(A)
3. 4.				Total Number of Dominant Species Across All Strata: 2 (B)
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC:100.0%(A/B)
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: Entire Wetland)				OBL species 13 x 1 = 13
1.				FACW species 3 x 2 = 6
2.				FAC species 3 x 3 = 9
0				FACU species 0 x 4 = 0
4.				UPL species 0 x 5 = 0
				Column Totals: 19 (A) 28 (B)
6				Prevalence Index = B/A = 1.47
7				
7				Hydrophytic Vegetation Indicators:
Host Otation (District E.C. W. H I.)		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: Entire Wetland)	_			X 2 - Dominance Test is >50%
Osmunda spectabilis	5	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹
2. Juncus effusus	5	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. Vitis riparia	3	<u>No</u>	FAC	
4. Phalaris arundinacea	3	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Carex stipata	3	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				
	19	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: Entire Wetland)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hydrophytic
3				Vegetation
4				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Profile Desc Depth	ription: (Describe to Matrix	o the de		cument to dox Featur		ator or c	onfirm the absence o	f indicator	rs.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	S
0-6	10YR 2/1	10					Sandy			
6-20	10YR 4/1	90	10YR 4/6	10	С	М	Sandy	Promin	ent redox co	ncentrations
							_			
1Type: C=Cc	oncentration, D=Deple	———	M-Reduced Matrix	MS-Mae	ked San	d Grains	² l ocation: F	I -Dore I in	ning, M=Matri	iv
Hydric Soil I		suon, ra	vi-i reduced iviatilix,	, IVIO-IVIAS	Keu San	u Grains.			natic Hydric	
Histosol			Dark Surface	e (S7)					LRR K, L, MI	
	ipedon (A2)		Polyvalue Be		ce (S8) (LRR R,			x (A16) (LRF	
Black His	stic (A3)		MLRA 149	B)			5 cm Mu	icky Peat o	r Peat (S3) (LRR K, L, R)
Hydrogei	n Sulfide (A4)		Thin Dark Su	-			149B) Polyvalu	e Below Su	urface (S8) (I	LRR K, L)
	Layers (A5)		High Chroma	-					(S9) (LRR K ,	-
	Below Dark Surface	(A11)	Loamy Muck	-		RK,L)		-		(LRR K, L, R)
	rk Surface (A12)		Loamy Gleye		F2)) (MLRA 149B)
	oodic (A17) A 144A, 145, 149B)		Depleted Mai		-6)				Surface (F22	side MLRA 145)
	ucky Mineral (S1)		Depleted Dark	-				xplain in R	-	-)
	leyed Matrix (S4)		Redox Depre		` '			лрішіт іт г	omanoj	
X Sandy R			Marl (F10) (L	•	-,		³ Indicato	ors of hydro	phytic vegeta	ation and
	Matrix (S6)		Red Parent N	-	21) (ML I	RA 145)			y must be pr	
							unless	disturbed	or problemat	tic.
	ayer (if observed):									
Type: _										
Depth (in	iches):						Hydric Soil Prese	nt?	Yes X	No
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P34
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W
	relief (concave, convex, none): Convex Slope %: 1
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41,662235	Long: -87.011202 Datum: NAD83
Soil Map Unit Name: Mm: Maumee loamy sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrologysignificantly distu	
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No _X	If yes, optional Wetland Site ID: Wetland 12
Remarks: (Explain alternative procedures here or in a separate report.) This point is in an upland rise between Wetlands 11 and 12 . Dominated I	by tulip poplar, sassafras, and black gum
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) Water-Stained Leaves	(B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Oxidized Rhizospheres	• • • • • • • • • • • • • • • • • • • •
Drift Deposits (B3) Presence of Reduced I	
Algal Mat or Crust (B4)Recent Iron Reduction	
Iron Deposits (B5) — Thin Muck Surface (C7	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Rema Sparsely Vegetated Concave Surface (B8)	Microtopographic Relief (D4) FAC-Neutral Test (D5)
	i AO-iveutiai Test (D3)
Field Observations: Surface Water Present? Yes No x Depth (inches)	
Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	
(includes capillary fringe)	Wettalid Hydrology Present: TesNOX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
,	·
Pomorko:	
Remarks:	

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 40 x 10)	% Cover	Species?	Status	Dominance Test worksheet:
1. Liriodendron tulipifera	25	Yes	FACU	Number of Dominant Species
2. Nyssa sylvatica	30	Yes	<u>FAC</u>	That Are OBL, FACW, or FAC:3(A)
3. Quercus rubra	10	No	FACU	Total Number of Dominant
4.				Species Across All Strata: 8 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 37.5% (A/B)
7				Prevalence Index worksheet:
	65	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:30x10)				OBL species 0 x 1 = 0
1. Euonymus alatus	10	Yes	UPL	FACW species 5 x 2 = 10
2. Sassafras albidum	10	Yes	FACU	FAC species 67 x 3 = 201
3. Ligustrum vulgare	7	Yes	FACU	FACU species 72 x 4 = 288
4.				UPL species 10 x 5 = 50
5.				Column Totals: 154 (A) 549 (B)
6.		•		Prevalence Index = B/A = 3.56
7.				Hydrophytic Vegetation Indicators:
	27	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 20x10)		•		2 - Dominance Test is >50%
1. Smilax rotundifolia	25	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
Onoclea sensibilis	5	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting
3. Nyssa sylvatica	5	No	FAC	data in Remarks or on a separate sheet)
4. Toxicodendron radicans	7	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Quercus rubra	1	No	FACU	-
6. Prunus serotina	3	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Ligustrum vulgare	3	No	FACU	Definitions of Vegetation Strata:
8. Rubus allegheniensis	3	No	FACU	
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.		-		
11.		- ——		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				
12.	52	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 10)		_ Total Cover		of size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size:10) 1. Vitis labrusca	10	Yes	FACU	Woody vines – All woody vines greater than 3.28 ft in
		- 165	FACU	height.
2.		. ——		Hydrophytic
3.		- —		Vegetation
4			-	Present?
	10	_=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Sampling Point: P34

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument t	he indica	tor or co	onfirm the absence of indi	cators.)
Depth	Matrix			x Featur				
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-12	10YR 2/2	100					Sandy	
12-18	10YR 4/1	100						
					-			
								_
	·							
¹ Type: C=Co	oncentration, D=Deple	etion RM	=Reduced Matrix N	 AS=Mas	ked Sand	Grains	² Location: PL =Po	re Lining, M=Matrix.
Hydric Soil I		Stion, rtiv	T TOUGOGO WIGHTX, IV	no mao	inca Garie	Oranio.		oblematic Hydric Soils ³ :
Histosol (Dark Surface (S7)				10) (LRR K, L, MLRA 149B)
	ipedon (A2)		Polyvalue Belo		ce (S8) (I	RR R,	•	Redox (A16) (LRR K, L, R)
Black His	stic (A3)		MLRA 149B)			5 cm Mucky F	eat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Thin Dark Surf	ace (S9) (LRR R	MLRA 1	149B) Polyvalue Bel	ow Surface (S8) (LRR K, L)
	Layers (A5)		High Chroma S	-			Thin Dark Sur	face (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)		se Masses (F12) (LRR K, L, R)
	rk Surface (A12)		Loamy Gleyed		(F2)			odplain Soils (F19) (MLRA 149B)
	oodic (A17)		Depleted Matri		-6)			aterial (F21) (outside MLRA 145)
	A 144A , 145 , 149B) ucky Mineral (S1)		Redox Dark Su Depleted Dark	-	-		Other (Explain	Dark Surface (F22)
	leyed Matrix (S4)		Redox Depres				Other (Explain	ili itelilaks)
	edox (S5)		Marl (F10) (LR		٠,		³ Indicators of	hydrophytic vegetation and
	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)		Irology must be present,
							unless distu	rbed or problematic.
	ayer (if observed):							
Type:								
Depth (in	iches):						Hydric Soil Present?	Yes No _X_
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P35
Investigator(s): Lydia Loyd & Kaitlin Rogers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W
	relief (concave, convex, none): Concave Slope %: 1
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.662129	Long: -87.011011 Datum: NAD83
Soil Map Unit Name: Mm - Maumee loamy sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 11
Remarks: (Explain alternative procedures here or in a separate report.)	
This is a small forested wetland between a dune slope and Highway 12. Do	ominated by black gum and silver maple.
, , , , , , , , , , , , , , , , , , ,	, ,
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inches):	
Water Table Present? Yes x No Depth (inches):	<u>10</u>
Saturation Present? Yes x No Depth (inches):	6 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of pla				Sampling Point: P35
<u>Tree Stratum</u> (Plot size: <u>Entire Wetland</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	60	Yes	FAC	Number of Dominant Species
2. Nyssa sylvatica	40	Yes	FAC	That Are OBL, FACW, or FAC: 4 (A)
3.				Total Number of Deminant
4.				Total Number of Dominant Species Across All Strata: 4 (B)
5.				
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
·	100	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: Entire Wetland)		•		OBL species 20 x 1 = 20
				FACW species 10 x 2 = 20
				FAC species 107 x 3 = 321
3				FACU species 13 x 4 = 52
4.				UPL species 0 x 5 = 0
· · · · · · · · · · · · · · · · · · ·				
5. 6.				Column Totals: 150 (A) 413 (B) Prevalence Index = B/A = 2.75
7				Hydrophytic Vegetation Indicators:
Ulark Otracking (Distractors E. F. W. (L. 1.)		_=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: Entire Wetland)				X 2 - Dominance Test is >50%
1. Osmunda spectabilis	20	Yes	<u>OBL</u>	$\frac{X}{X}$ 3 - Prevalence Index is ≤3.0 ¹
2. Fraxinus pennsylvanica	10	Yes	<u>FACW</u>	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
3. <u>Smilax rotundifolia</u>	7	No	<u>FAC</u>	
4. Mitchella repens	3	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Sassafras albidum	5	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
6. Carex swanii	5	No	FACU	be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	50	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: Entire Wetland)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Livedra why die
3				Hydrophytic Vegetation
4				Present? Yes X No No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)	-		
remarks. (include prioto numbers here of on a separ	ale sileel.)			

Depth	cription: (Describe to Matrix	o the de	-	ument ti x Featur		ator or c	onfirm the absence of ind	icators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 2/1	100					Mucky Sand	
10-16	10YR 4/3	100					Sandy	
			-					
							_	
¹ Type: C=C	oncentration, D=Deple	etion RN	######################################	MS=Mas	ked Sand	d Grains	² I ocation: PI =Po	ore Lining, M=Matrix.
Hydric Soil						<u> </u>		oblematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface ((S7)				A10) (LRR K, L, MLRA 149B)
Histic Ep	oipedon (A2)		Polyvalue Belo	ow Surfa	ce (S8) (LRR R,	Coast Prairie	Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		MLRA 149B	-				Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		Thin Dark Surf					low Surface (S8) (LRR K, L)
	d Layers (A5)	(4.44)	— High Chroma S					rface (S9) (LRR K, L)
	d Below Dark Surface ark Surface (A12)	(A11)	Loamy Mucky			RK,L)		ese Masses (F12) (LRR K, L, R)
	podic (A17)		Loamy Gleyed Depleted Matri		F2)			odplain Soils (F19) (MLRA 149B) ⁄laterial (F21) (outside MLRA 145
	A 144A, 145, 149B)		Redox Dark Su		- 6)			Dark Surface (F22)
	Mucky Mineral (S1)		Depleted Dark					n in Remarks)
Sandy C	Gleyed Matrix (S4)		Redox Depres	sions (F	8)		<u>—</u>	
	Redox (S5)		Marl (F10) (LR	RK, L)				hydrophytic vegetation and
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	-	drology must be present,
D4-1 -41	l						unless dist	urbed or problematic.
Type:	Layer (if observed):							
							Headaile Oeill Bases and O	V V N-
Depth (ii	ncnes):						Hydric Soil Present?	Yes <u>X</u> No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P36
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W
·	relief (concave, convex, none): Concave Slope %: 3
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.661959	Long: -87. 010861 Datum: NAD83
Soil Map Unit Name: OaE - Oakville fine sand,	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Yes No _X_	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
This point is an upland slope to the south of Wetland 11 with several borea	al felict species. Gautifieria procumberis and mitoriona reports
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) Water-Stained Leaves (I	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4)Recent Iron Reduction in	
Iron Deposits (B5)Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	ovious inspections) if available:
Describe Recorded Data (stream gauge, monitoring well, aerial priotos, pro	EVIOUS HISPECTIONS), II available.
Remarks:	

				Sampling Point: P36
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
ercus rubra	30	Yes	FACU	Number of Dominant Species
ssa sylvatica	25	No	FAC	That Are OBL, FACW, or FAC: 2 (A)
mamelis virginiana	30	Yes	FACU	Total Number of Dominant
ssafras albidum	25	No	FACU	Species Across All Strata: 5 (B)
er rubrum	30	Yes	FAC	Percent of Dominant Species
				That Are OBL, FACW, or FAC: 40.0% (A/B
				Prevalence Index worksheet:
	140	=Total Cover		Total % Cover of: Multiply by:
 <u>'Shrub Stratum</u> (Plot size: 20)		•		OBL species 0 x 1 = 0
mamelis virginiana	30	Yes	FACU	FACW species 30 x 2 = 60
				FAC species 58 x 3 = 174
				FACU species 131 x 4 = 524
				UPL species 3 x 5 = 15
				Column Totals: 222 (A) 773 (B
				Prevalence Index = B/A = 3.48
				Hydrophytic Vegetation Indicators:
	30	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
r <u>atum</u> (Plot size: 10)		•		2 - Dominance Test is >50%
mundastrum cinnamomeum	30	Yes	FACW	3 - Prevalence Index is ≤3.0 ¹
ssa sylvatica	3	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
ultheria procumbens	7	No	FACU	data in Remarks or on a separate sheet)
odendron tulipifera	3	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
ccinium angustifolium	5	No	FACU	<u> </u>
elanchier arborea	1	No No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
rex pensylvanica	3	No	UPL	Definitions of Vegetation Strata:
ox periogramioa				
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
				Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardles
_	52	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
				height.
				Hydrophytic
				Present? Yes No X
		=Total Cover		
s: (Include photo numbers here or on a senara	ote sheet)	•		
s: (Include photo numbers here or on a separa	ate sheet.)	•		Vegetation Present?

Profile Description: (Describe to the	•			tor or co	confirm the absence of indicators.)	
Depth Matrix		x Featur				
(inches) Color (moist) %	Color (moist)		Type ¹	Loc ²	Texture Remarks	
0-12 10YR 2/2 100					Sandy	
12-1810YR 4/1100	_				Sandy	
						—
	_					—
						—
¹ Type: C=Concentration, D=Depletion, I	- ———— RM=Reduced Matrix N	MS=Mas	ked Sand	Grains	. ² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:	, .				Indicators for Problematic Hydric Soils ³ :	
Histosol (A1)	Dark Surface ((S7)			2 cm Muck (A10) (LRR K, L, MLRA 149B)	
Histic Epipedon (A2)	Polyvalue Beld	ow Surfa	ce (S8) (I	RR R,	Coast Prairie Redox (A16) (LRR K, L, R)	
Black Histic (A3)	MLRA 149B	3)			5 cm Mucky Peat or Peat (S3) (LRR K, L, I	R)
Hydrogen Sulfide (A4)	Thin Dark Surf				149B) Polyvalue Below Surface (S8) (LRR K, L)	
Stratified Layers (A5)	High Chroma	-			Thin Dark Surface (S9) (LRR K, L)	
Depleted Below Dark Surface (A11)				R K, L)	Iron-Manganese Masses (F12) (LRR K, L,	
Thick Dark Surface (A12)	Loamy Gleyed		F2)		Piedmont Floodplain Soils (F19) (MLRA 14	
Mesic Spodic (A17)	Depleted Matr		·6)		Red Parent Material (F21) (outside MLRA Very Shallow Dark Surface (F22)	145)
(MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1)	Redox Dark Some Depleted Dark				Other (Explain in Remarks)	
Sandy Gleyed Matrix (S4)	Redox Depres				Other (Explain in Remarks)	
Sandy Redox (S5)	Marl (F10) (LR		-,		³ Indicators of hydrophytic vegetation and	
Stripped Matrix (S6)	Red Parent Ma		21) (MLR	RA 145)	wetland hydrology must be present,	
					unless disturbed or problematic.	
Restrictive Layer (if observed):						
Type:						
Depth (inches):					Hydric Soil Present? Yes NoX	_
Remarks:					•	

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P37				
Investigator(s): Lydia Loyd & Kaitlin Rogers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W				
	relief (concave, convex, none): Concave Slope %:				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.66159	Long: -87.012259 Datum: NAD83				
Soil Map Unit Name: Mm - Maumee loamy sand	NWI classification: none				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly disturb	<u> </u>				
Are Vegetation, Soil, or Hydrology naturally problema					
SUMMARY OF FINDINGS – Attach site map showing sam					
Undershidia Vagatatian Dracent2 Vag. V. No.	Is the Complet Avec				
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 13				
Remarks: (Explain alternative procedures here or in a separate report.)					
Point is in a forested wetland south of Highway 12 dominated by red maple	e, black gum. The area surrounding the wetland is full of invasive species.				
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) Water-Stained Leaves (E	B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes x No Depth (inches):					
Saturation Present? Yes x No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
, -					
Remarks:					

VEGETATION – Use scientific names of plants.

VEGETATION – Use scientific names of pla				Sampling Point: P37
<u>Tree Stratum</u> (Plot size:30x30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Liriodendron tulipifera	10	No	FACU	Number of Dominant Species
2. Acer rubrum	60	Yes	FAC	That Are OBL, FACW, or FAC: 7 (A)
3. Nyssa sylvatica	30	Yes	FAC	Total Number of Dominant
4. Fraxinus pennsylvanica	10	No	FACW	Species Across All Strata: 7 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
	110	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:20x20)				OBL species43 x 1 =43
1. Fraxinus pennsylvanica	15	Yes	FACW	FACW species 52 x 2 = 104
2. Lindera benzoin	10	Yes	_FACW	FAC species 97 x 3 = 291
3. Populus deltoides	7	Yes	FAC	FACU species 17 x 4 = 68
4.				UPL species 0 x 5 = 0
5.				Column Totals: 209 (A) 506 (B)
6.				Prevalence Index = B/A = 2.42
7.				Hydrophytic Vegetation Indicators:
	32	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10x10)		•		X 2 - Dominance Test is >50%
Osmunda spectabilis	13	Yes	OBL_	X 3 - Prevalence Index is ≤3.0 ¹
2. Onoclea sensibilis	7	No	FACW	4 - Morphological Adaptations (Provide supporting
3. Thelypteris palustris	10	No	FACW	data in Remarks or on a separate sheet)
4. Carex crinita	30	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Mitchella repens	7	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
6.				be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				
	67	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20x20)		•		Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic
4.				Vegetation Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	rate sheet)	-		<u></u>
Tromano. (morado pristo namboro non o con en	ato ones.,			

Profile Desci Depth	ription: (Describe to Matrix	o the de		<mark>ument th</mark> x Feature		ator or co	onfirm the absence o	f indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	10YR 4/1	95	10YR 4/6	5	С	M	Sandy		
10-18	10YR 5/4	70	10YR 5/8	30	С	М	Sandy	Prominent redox concentrations	
	ncentration, D=Deple	etion, RN	/I=Reduced Matrix, M	/IS=Masl	ked Sand	d Grains.		L=Pore Lining, M=Matrix.	
Hydric Soil II			5 1 5 6 7					or Problematic Hydric Soils ³ :	
— Histosol (Dark Surface ((00) (ick (A10) (LRR K, L, MLRA 149B)	
Black His	ipedon (A2)		Polyvalue Belo MLRA 149B		ce (S8) (LRK K,		rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa	•	(LRR R	. MLRA 1		ie Below Surface (S8) (LRR K, L)	
	Layers (A5)		High Chroma S		-			rk Surface (S9) (LRR K, L)	
	Below Dark Surface	(A11)	Loamy Mucky I					nganese Masses (F12) (LRR K, L, R)	
Thick Da	rk Surface (A12)		Loamy Gleyed	Matrix (F2)		Piedmor	nt Floodplain Soils (F19) (MLRA 149B)	
	odic (A17)		Depleted Matrix					ent Material (F21) (outside MLRA 145	
	A 144A, 145, 149B)		Redox Dark Su					allow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark				Other (E	xplain in Remarks)	
X Sandy Re	eyed Matrix (S4)		Redox Depress	-	5)		³ Indicato	ors of hydrophytic vegetation and	
	Matrix (S6)		Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145)					nd hydrology must be present,	
	()						unless disturbed or problematic.		
Restrictive L	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Presei	nt? Yes <u>X</u> No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/4/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P38					
Investigator(s): Lydia Loyd & Kaitlin Rodgers	Section, Township, Range: SW 1/4 SW 1/4 SEC17 T37N R5W					
	relief (concave, convex, none): Concave Slope %: 2					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.661535	Long: -87.012241 Datum: NAD83					
Soil Map Unit Name: Mm - Maumee loamy sand	NWI classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology significantly distur						
Are Vegetation, Soil, or Hydrology naturally problems	·					
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area					
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_					
Wetland Hydrology Present? Yes No _X	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.) This point is upslode from Wetland 13 in a degraded dune forest with burir	ng bush and asian bittersweet.					
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) Water-Stained Leaves ((B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _x Depth (inches):						
Water Table Present? Yes No x Depth (inches):						
Saturation Present? Yes No x Depth (inches):	Wetland Hydrology Present? Yes No _X					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Demandra						
Remarks:						

VEGETATION – Use scientific names of plants.

Trans Christians (Diet sines 20	Absolute % Cover	Dominant	Indicator	Daminanaa Taat waxlaabaat			
Tree Stratum (Plot size: 30)		Species?	Status	Dominance Test worksheet:			
1. Populus tremuloides	15	Yes	FAC	Number of Dominant Species			
2. Acer rubrum	15	Yes	FAC	That Are OBL, FACW, or FAC:2 (A)			
3. Sassafras albidum	10	No	FACU	Total Number of Dominant			
4. Liriodendron tulipifera	25	Yes	FACU	Species Across All Strata: 7 (B)			
5				Percent of Dominant Species			
6				That Are OBL, FACW, or FAC:28.6%(A/B)			
7				Prevalence Index worksheet:			
	65	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0			
1. Euonymus alatus	50	Yes	UPL	FACW species 10 x 2 = 20			
2. Fraxinus pennsylvanica	10	No	FACW	FAC species 42 x 3 = 126			
3.				FACU species <u>84</u> x 4 = <u>336</u>			
4				UPL species90 x 5 =450			
5				Column Totals: 226 (A) 932 (B)			
6.				Prevalence Index = B/A = 4.12			
7.				Hydrophytic Vegetation Indicators:			
	60	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		-		2 - Dominance Test is >50%			
1. Carex pensylvanica	30	Yes	UPL	3 - Prevalence Index is ≤3.0 ¹			
Convallaria majalis	10	Yes	UPL	4 - Morphological Adaptations ¹ (Provide supporting			
3. Nabalus albus	7	No	FACU	data in Remarks or on a separate sheet)			
4. Nyssa sylvatica	5	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)			
Parthenocissus quinquefolia	7	No	FACU	<u> </u>			
6. Pteridium aquilinum	5	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7. Maianthemum stellatum	7	No No	FAC	Definitions of Vegetation Strata:			
8.			1710				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
10.							
11.		· ——		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
12.		· ——	-	and greater than or equal to 6.20 ft (1 m) tail.			
12.	71	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size: 20)		- Total Cover		or size, and woody plants less than 3.20 it tall.			
Celastrus orbiculatus	30	Yes	FACU	Woody vines – All woody vines greater than 3.28 ft in			
		165	FACU	height.			
2				Hydrophytic			
3.				Vegetation			
4				Present?			
	30	=Total Cover					
Remarks: (Include photo numbers here or on a separate	rate sheet.)						

Sampling Point: P38

Profile Desc Depth	ription: (Describe to Matrix	o the de		ument tl x Featur		ator or c	onfirm the absence of i	indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-10	10YR 4/4	100					Sandy		
10-16	10YR 5/6	100					Sandy		
									_
¹ Type: C=Co	oncentration, D=Deple	etion, RN	/I=Reduced Matrix, N	MS=Mas	ked Sand	d Grains.		=Pore Lining, M	
Hydric Soil I								Problematic H	-
Histosol			Dark Surface (-	.=				L, MLRA 149B)
	ipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,		irie Redox (A16)	
Black His			MLRA 149B Thin Dark Surf	-	\ /I DD D	MIDA		ky Peat or Peat Below Surface ((S3) (LRR K, L, R)
	n Sulfide (A4) Layers (A5)		High Chroma S					Surface (S9) (L	
	Below Dark Surface	(A11)	Loamy Mucky						[F12] (LRR K, L, R)
	rk Surface (A12)	(,,,,	Loamy Gleyed			, =/			(F19) (MLRA 149B)
	oodic (A17)		Depleted Matri		,				(outside MLRA 145)
(MLR	A 144A, 145, 149B)		Redox Dark Su	urface (F	6)		Very Shall	ow Dark Surface	e (F22)
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Exp	olain in Remarks	s)
	leyed Matrix (S4)		Redox Depres	-	8)				
	edox (S5)		Marl (F10) (LR					of hydrophytic	-
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)		hydrology must	
Do atalasia a							unless o	disturbed or prob	olematic.
Type:	.ayer (if observed):								
-								.	N V
Depth (in	iches):						Hydric Soil Present	? Yes_	No_X
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P39					
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W					
• • • • • • • • • • • • • • • • • • • •	relief (concave, convex, none): None Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.644934	Long: -87.052038 Datum: NAD83					
Soil Map Unit Name: OcA - Oakville fine sand	NWI classification: None					
·						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturb						
Are Vegetation, Soil, or Hydrology naturally problema	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.					
Hudwards to Variation Dresset Variation Name	In the Commission Area					
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 29					
Remarks: (Explain alternative procedures here or in a separate report.)	,,					
This wetland is an interdunal wetland dominated by red and silver maple, g	areen ash, pin oak, and mulifloral rose.					
,	,, , , , , , , , , , , , , , , , ,					
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)					
X Surface Water (A1) Water-Stained Leaves (E	B9) Drainage Patterns (B10)					
X High Water Table (A2) Aquatic Fauna (B13)	X Moss Trim Lines (B16)					
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
X Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres o	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remarl	ks)Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes X No Depth (inches):						
Water Table Present? Yes X No Depth (inches):	0					
Saturation Present? Yes X No Depth (inches):	0 Wetland Hydrology Present? YesX No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
Tomano.						

VEGETATION – Use scientific names of plants.

EGETATION – Use scientific names of pla				Sampling Point: P39
Tree Stratum (Plot size: 30 radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
. Acer rubrum	40	Yes	FAC	Number of Dominant Species
Quercus palustris	25	Yes	FACW	That Are OBL, FACW, or FAC: 11 (A)
. Crataegus crus-galli	10	No	FAC	Total Number of Deminant
Fraxinus pennsylvanica	25	Yes	FACW	Total Number of Dominant Species Across All Strata: 13 (B)
i.				
				Percent of Dominant Species That Are OBL, FACW, or FAC: 84.6% (A/B
•				Prevalence Index worksheet:
	100	=Total Cover		Total % Cover of: Multiply by:
sapling/Shrub Stratum (Plot size:20 radius)				OBL species55 x 1 =55
. Fraxinus pennsylvanica	25	Yes	FACW	FACW species 108 x 2 = 216
Lindera benzoin	20	Yes	FACW	FAC species 112 x 3 = 336
Rosa multiflora	10	No	FACU	FACU species 41 x 4 = 164
				UPL species 0 x 5 = 0
				Column Totals: 316 (A) 771 (B
				Prevalence Index = B/A = 2.44
				Hydrophytic Vegetation Indicators:
	 55	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
lerb Stratum (Plot size: 10 radius)		-		X 2 - Dominance Test is >50%
. Toxicodendron radicans	10	Yes	FAC	X 3 - Prevalence Index is ≤3.0 ¹
Boehmeria cylindrica	15	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting
. Elymus riparius	5	No	FACW	data in Remarks or on a separate sheet)
. Allium canadense	7	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
Ranunculus hispidus	30	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must
Glyceria striata	10	Yes	OBL	be present, unless disturbed or problematic.
Lycopus uniflorus	10	Yes	OBL	Definitions of Vegetation Strata:
. Carex gracillima	7	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in
. Packera glabella	1	No	FACW	diameter at breast height (DBH), regardless of height
0. Cicuta maculata	5	No	OBL	
1. Ulmus rubra	7	No	FAC	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
2. Symphyotrichum lateriflorum	3	No	FAC	
	137	=Total Cover		Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size: 20 radius)		-		
. Vitis riparia	7	Yes	FAC	Woody vines – All woody vines greater than 3.28 ft i height.
Celastrus orbiculatus	10	Yes	FACU	g.m
Parthenocissus guinquefolia	7	Yes	FACU	Hydrophytic
- Taranenooissas yamyaerona		103	1700	Vegetation Present? Yes X No
·		T-1-1-0		11636HE 163 X
	24	=Total Cover		

VEGETATION Continued – Use scientific names of plants. Sampling Point: P39 Absolute Dominant Indicator Tree Stratum % Cover Species? Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 100 =Total Cover Sapling/Shrub Stratum 8. 9. ____ 55 =Total Cover Herb Stratum 13. Dichanthelium clandestinum 7 __ _ No **FACW** 5 14. Carex lupulina No OBL No___ 15. Lobelia cardinalis 5____ OBL _____5 ___No____ 16. Carex stricta OBL 17. Dioscorea villosa 5 No ____ FAC 19. 21. ____ 137 =Total Cover Woody Vine Stratum 7. 24 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

(MLRA 144A, 145, 149B)Redox Dark Surface (F6)Very Shallow Dark Surface (F22)XSandy Mucky Mineral (S1)Depleted Dark Surface (F7)Other (Explain in Remarks)Sandy Gleyed Matrix (S4)Redox Depressions (F8)Sandy Redox (S5)Marl (F10) (LRR K, L)3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Sandy
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Caption: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Thidicators for Problematic Hydric Soils*:
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Jecation: PL=Pore Lining, M=Matrix.* *Hydric Soil Indicators: Indicators for Problematic Hydric Soils*: Histosoi (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR K, L, R) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (outside MLRA 145) (MLRA 144A, 145, 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) X Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) Sandy Redox (S5) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Marl (F10) (LRR K, L) Stripped Matrix (S6) Dark Surface (S7) Delated Selow Surface (A10) Dark Surface (S8) (LRR R, MLRA 149B) Sc m Mucky Peat or Peat (S3) (LRR K, L, R) Doughter R, L, R) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (A17) Depleted Matrix (F3) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) As Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Dark Surface (S8) (LRR R, Dark Surface (S8) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Follyvalue Below Surface (S3) (LRR K, L, R) Follyvalue Below Surface (S9) (LRR K, L
Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144B) Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR K, L, R) Tocast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Tocast Prairie Redox (A16) (LRR K, L, R) Strem Mucky Peat or Peat (S3) (LRR K, L, R) Folyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present,
Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Polyvalue Below Surface (A16) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present,
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) MIRA 149B) MIRA 149B) Thin Dark Surface (S9) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (outside MLRA 145) (MLRA 144A, 145, 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present,
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present,
Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Redox Depressions (F8) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Very Shallow Dark Surface (F22) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Mesic Spodic (A17) (MLRA 144A, 145, 149B) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Matrix (F3) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Redox Depressions (F8) Marl (F10) (LRR K, L) Wetland hydrology must be present,
(MLRA 144A, 145, 149B)Redox Dark Surface (F6)Very Shallow Dark Surface (F22)XSandy Mucky Mineral (S1)Depleted Dark Surface (F7)Other (Explain in Remarks)Sandy Gleyed Matrix (S4)Redox Depressions (F8)Sandy Redox (S5)Marl (F10) (LRR K, L)3Indicators of hydrophytic vegetation and wetland hydrology must be present,
X Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Marl (F10) (LRR K, L) Indicators of hydrophytic vegetation and wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Redox Depressions (F8) Marl (F10) (LRR K, L) Wetland hydrology must be present,
Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes X No
Remarks:

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P40					
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W					
	relief (concave, convex, none): None Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.644996	Long: -87.052166 Datum: NAD83					
Soil Map Unit Name: OcA - Oakville fine sand	NWI classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology significantly distur						
Are Vegetation, Soil, or Hydrology naturally problems						
SUMMARY OF FINDINGS – Attach site map showing sam						
SUMMANT OF FINDINGS - Attach site map showing san	ipinig point locations, transects, important leatures, etc.					
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area					
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_					
Wetland Hydrology Present? Yes No _X	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.) This point is in an upland forested area, just south of wetland 29 .This area dominated by red maple, black cherry, spice bush, and asian bittersweet.	a is between Tremont Road and 49, south of Route 12, The forest is					
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)Water-Stained Leaves (B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced Inc						
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No X Depth (inches):	0					
Water Table Present? Yes No X Depth (inches):	0					
Saturation Present? Yes X No Depth (inches):	10 Wetland Hydrology Present? Yes No _X					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants.

						P40
Tree Stratum (Plot size: 30 radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. Prunus serotina	20	No	FACU	Number of Dominant Species		
2. Liriodendron tulipifera	7	No	FACU	That Are OBL, FACW, or FAC:	3	(A)
3. Acer rubrum	75	Yes	FAC	Total Number of Dominant		_
4. Sassafras albidum	20	No	FACU	Species Across All Strata:	7	(B)
5. Fraxinus pennsylvanica	10	No	FACW	Percent of Dominant Species		-
6. Tilia americana	10	No	FACU	That Are OBL, FACW, or FAC:	42.9%	(A/B)
7.				Prevalence Index worksheet:		
	142	=Total Cover		Total % Cover of:	Multiply by:	
Sapling/Shrub Stratum (Plot size: 20 radius)		-		OBL species 0 x 1	= 0	_
1. Rosa multiflora	10	Yes	FACU	FACW species 30 x 2	= 60	_
2. Amelanchier arborea	7	No	FACU	FAC species 120 x 3	= 360	_
3. Crataegus crus-galli	5	No	FAC	FACU species 188 x 4	= 752	_
4. Ulmus rubra	5	No	FAC	UPL species 13 x 5	= 65	_
5. Berberis thunbergii	7	No	FACU	Column Totals: 351 (A)	1237	— (B)
6. Euonymus alatus	10	Yes	UPL	Prevalence Index = B/A =	3.52	
7. Lindera benzoin	20	Yes	FACW	Hydrophytic Vegetation Indicato	ors:	
	64	=Total Cover		1 - Rapid Test for Hydrophytic		
Herb Stratum (Plot size: 10 radius)		-		2 - Dominance Test is >50%	J	
1. Mitchella repens	30	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹		
Maianthemum canadense	7	No	FACU	4 - Morphological Adaptations	1 (Provide sur	oportino
3. Polygonatum biflorum	7	No	FACU	data in Remarks or on a se		
4. Carex blanda	5	No	FAC	Problematic Hydrophytic Vege	etation ¹ (Expla	ain)
5. Parthenocissus quinquefolia	10	No	FACU	1 Indicators of budgie cell and water		
6. Smilax rotundifolia	20	Yes	FAC	¹ Indicators of hydric soil and wetla be present, unless disturbed or pro		must
7. Smilax hispida	10	No	FAC	Definitions of Vegetation Strata:		
8. Carex pensylvanica	3	No	UPL			
9. Circaea canadensis	3	No	FACU	Tree – Woody plants 3 in. (7.6 cm diameter at breast height (DBH), r	,	height.
10.						_
11.		-		Sapling/shrub – Woody plants lest and greater than or equal to 3.28 f		אטר
12.		·			, ,	
	95	=Total Cover		Herb – All herbaceous (non-wood) of size, and woody plants less that		ardless
Woody Vine Stratum (Plot size: 20 radius)		•				00 %
1. Celastrus orbiculatus	50	Yes	FACU	Woody vines – All woody vines go height.	reater than 3.	28 π In
2.						
3.				Hydrophytic		
4.				Vegetation Present? Yes	No X	
	50	=Total Cover			· <u> </u>	
Remarks: (Include photo numbers here or on a sepa		-		1		

VEGETATION Continued – Use scientific names of plants. Sampling Point: P40 Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 142 =Total Cover Sapling/Shrub Stratum 9. ____ 64 =Total Cover Herb Stratum 21. _____ 95 =Total Cover Woody Vine Stratum 7. 50 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descri	ption: (Describe to	o the de				tor or co	onfirm the absence of indica	ators.)	
Depth	Matrix			x Featur					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks	
0-10	10YR 3/1	100					Sandy		
10-18	10YR 4/3	100					Sandy		
	_								
1			Dadward Matrix N	40. 14.			21 + i	Links A NASA	
Hydric Soil In	centration, D=Deple	etion, Riv	I=Reduced Matrix, N	/IS=IVIAS	ked Sand	Grains.	² Location: PL=Pore		silo ³ .
Histosol (A			Dark Surface (S7)				o) (LRR K, L, MLR	
Histic Epip	=		Polyvalue Belo		ce (S8) (I	RR R		edox (A16) (LRR K	
Black Hist			MLRA 149B		(55) (5			at or Peat (S3) (LR	
	Sulfide (A4)		Thin Dark Surf	,) (LRR R,	MLRA 1		v Surface (S8) (LR	-
	_ayers (A5)		High Chroma S					ce (S9) (LRR K, L	•
Depleted E	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LRF	R K, L)	Iron-Manganese	e Masses (F12) (Lf	RR K, L, R)
Thick Dark	k Surface (A12)		Loamy Gleyed	Matrix ((F2)		Piedmont Flood	plain Soils (F19) (I	MLRA 149B)
Mesic Spo			Depleted Matri					erial (F21) (outsid	e MLRA 145)
	144A, 145, 149B)		Redox Dark Su	-	-			ark Surface (F22)	
	cky Mineral (S1)		Depleted Dark				Other (Explain i	n Remarks)	
Sandy Gle	eyed Matrix (S4)		Redox Depres		8)		3Indicators of h	drophytic vegetation	on and
Stripped M			Marl (F10) (LR Red Parent Ma		(21) (MI E	ο Λ 1.45\		ology must be pres	
Stripped iv	natrix (50)		Red raient wa	ateriai (i	Z I) (IVILI	(A 140)		ped or problematic.	
Restrictive La	yer (if observed):								
Type:	,								
Depth (inc	hes):						Hydric Soil Present?	Yes	No <u>X</u>
Remarks:							•		

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P41
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W
- 1	relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.642297	Long: -87.061441 Datum: NAD83
Soil Map Unit Name: MuuA - Morocco loamy sand, lake plain	NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology significantly disturb	
Are Vegetation, Soil, or Hydrology naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 30
Remarks: (Explain alternative procedures here or in a separate report.)	
This wetland is a wide interdunal, forested wetland located just east of S.R.	9 7 7 7 1 7
maple, spice bush, japanese barberry, reed canary grass, and fowl manna	grass. Most of this wetland is degraded.
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) X Water-Stained Leaves (E	—
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (0	
Sediment Deposits (B2) Oxidized Rhizospheres of	
Drift Deposits (B3) Presence of Reduced Iro	- · · · · -
Algal Mat or Crust (B4) Recent Iron Reduction in	• •
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	T NO-Noute 1000 (DO)
Surface Water Present? Yes No _x Depth (inches):	
Water Table Present? Yes X No Depth (inches):	
Saturation Present? Yes X No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections) if available.
Describe Nesserved Bata (Stream gauge, memoring went, acres. p. 2	rious inspections, in available.
Remarks:	

VEGETATION – Use scientific names of plants.

EGETATION – Use scientific names of pla				Sampling Point: P41	
<u>ree Stratum</u> (Plot size: <u>30 radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
. Quercus palustris	75	Yes	FACW	Number of Dominant Species	
Ulmus americana	40	Yes	FACW	· ·	(A)
·				Total Number of Dominant	
·				Species Across All Strata: 8	(B)
·				Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5%	(A/B
				Prevalence Index worksheet:	A/D
	 115	=Total Cover		Total % Cover of: Multiply by:	
apling/Shrub Stratum (Plot size: 20 radius)		- Total Govel		OBL species 25 x 1 = 25	-
Lonicera X bella	5	No	FACU	FACW species 153 x 2 = 306	-
Rosa multiflora		No No	FACU	FAC species 17 x 3 = 51	-
	25	Yes	FACW	' 	-
Fraxinus pennsylvanica Lindera benzoin	5			· 	-
	5	No No	FACU FACU	'	- /D
. Berberis thunbergii			FACU	Column Totals: 252 (A) 610 Prevalence Index = B/A = 2.42	_ (B
				Hydrophytic Vegetation Indicators:	
	47	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	
erb Stratum (Plot size: 10 radius)		-		X 2 - Dominance Test is >50%	
. Alliaria petiolata	3	No	FACU	X 3 - Prevalence Index is ≤3.0 ¹	
Impatiens capensis	<u>5</u>	No	FACW	4 - Morphological Adaptations ¹ (Provide supp	ortir
. Geum canadense		No	FAC	data in Remarks or on a separate sheet)	Ortin
Allium canadense	20	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain	n)
. Glyceria striata	25	Yes	OBL	-	
. Phalaris arundinacea	3	No	FACW	¹ Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic.	ıust
Symphyotrichum lateriflorum	3	No	FAC	Definitions of Vegetation Strata:	
			1710		
· -				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of he	eiaht
0.					-
1.				Sapling/shrub – Woody plants less than 3 in. Df and greater than or equal to 3.28 ft (1 m) tall.	3H
2.					
	66	=Total Cover		Herb – All herbaceous (non-woody) plants, regar of size, and woody plants less than 3.28 ft tall.	dles
Voody Vine Stratum (Plot size: 20 radius)		•			
. Vitis riparia	7	Yes	FAC	Woody vines – All woody vines greater than 3.29 height.	3 ft i
. Celastrus orbiculatus	10	Yes	FACU		
Parthenocissus quinquefolia	7	Yes	FACU	Hydrophytic	
				Vegetation Present? Yes X No	
	24	=Total Cover			

		the dep				ator or c	onfirm the absence o	findicator	s.)	
Depth	Matrix			x Featur		. 2				
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	<u>Texture</u>		Remarks	<u> </u>
0-8	10YR 3/1	100					Mucky Loam/Clay			
8-16	10YR 4/1	95	10YR 5/8	5	<u>C</u>	<u>M</u>	Sandy	Promine	ent redox co	ncentrations
	_		_							
¹ Type: C=Co	ncentration, D=Deple	tion, RM	=Reduced Matrix, N	MS=Mas	ked Sand	d Grains.				
Hydric Soil Ir							Indicators for		-	
Histosol (•		Dark Surface (-					RR K, L, MI	•
	pedon (A2)		Polyvalue Beld		ce (S8) (LRR R,			(A16) (LRF	•
Black His	แต (A3) ı Sulfide (A4)		MLRA 149B Thin Dark Surf	,	/I DD D	MIDA		-	rface (S8) (LRR K, L, R)
	Layers (A5)		High Chroma						S9) (LRR K	•
	Below Dark Surface	(A11)	X Loamy Mucky	-				-		(LRR K, L, R)
	k Surface (A12)	,	Loamy Gleyed			, ,		-) (MLRA 149B)
Mesic Sp	odic (A17)		Depleted Matr		,					side MLRA 145)
(MLRA	A 144A, 145, 149B)		Redox Dark S	urface (F	6)		Very Sha	allow Dark S	Surface (F22	2)
	ucky Mineral (S1)		Depleted Dark				Other (E	xplain in Re	emarks)	
	eyed Matrix (S4)		Redox Depres	-	8)		3			
Sandy Re	` '		Marl (F10) (LR		04) (84) [2445			ohytic vegeta	
Stripped i	Matrix (S6)		Red Parent Ma	ateriai (F	∠ 1) (IVILI	KA 145)			/ must be pr or problemat	
Restrictive L	aver (if observed):						dilicas	distarbed	or problema	uo.
Type:	a y o. (oo).									
Depth (inc	ches):						Hydric Soil Preser	nt?	Yes X	No
Remarks:			<u> </u>				1			

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P42
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W
	relief (concave, convex, none): Convex Slope %: 20
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.642208	Long: -87.06189 Datum: NAD83
Soil Map Unit Name: PIB - Plainfield sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturb	
Are Vegetation, Soil, or Hydrology naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	
Was No V	
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No X If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	11 you, optional frontal one is:
This point is on the side of a dune on the east side of SR 49, near the 49/R	Route 12 intersection. This forest is invaded with oriental bttersweet, but
otherwise has good structure.	
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) Water-Stained Leaves (E	B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres of	
Drift Deposits (B3) Presence of Reduced Iro	- · · · · · -
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No x Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
(3 3 / 3 / 1 · 1 · 1 · 1 · 1 · 1 · 1 · 1 · 1 · 1	,,
Remarks:	

VEGETATION – Use scientific names of plants.

۷E	GETATION – Use scientific names of pla	.nts.			Sampling Point: P	42
Tre	ee Stratum (Plot size: 30 radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.	Quercus rubra	40	Yes	FACU	Number of Dominant Species	
2.	Acer saccharinum	30	Yes	FACW	That Are OBL, FACW, or FAC: 2	(A)
3.	Acer rubrum	10	No	FAC	Total Number of Dominant	
4.	Liriodendron tulipifera	10	No	FACU	Species Across All Strata: 8	(B)
5.	Quercus velutina	15	No	UPL	Percent of Dominant Species	
6.	Cornus florida	7	No	FACU	That Are OBL, FACW, or FAC: 25.0%	(A/B)
7.	Sassafras albidum	10	No	FACU	Prevalence Index worksheet:	
		127	=Total Cover		Total % Cover of: Multiply by	y:
Sa	pling/Shrub Stratum (Plot size:20 radius)		,		OBL species 0 x 1 = 0	
1.	Euonymus alatus	25	Yes	UPL	FACW species 60 x 2 = 120	0
2.	Fraxinus pennsylvanica	30	Yes	FACW	FAC species 10 x 3 = 30)
3.	Viburnum acerifolium	10	No	UPL	FACU species 157 x 4 = 628	8
4.	Berberis thunbergii	5	No	FACU	UPL species 53 x 5 = 265	 5
5.	Prunus serotina	3	No	FACU	Column Totals: 280 (A) 104	43 (B)
6.					Prevalence Index = B/A = 3.73	
7.		-			Hydrophytic Vegetation Indicators:	
		73	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	n
Не	erb Stratum (Plot size: 10 radius)	-	•		2 - Dominance Test is >50%	
1.	Parthenocissus quinquefolia	15	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹	
2.	Euonymus alatus	3	No	UPL	4 - Morphological Adaptations ¹ (Provide s	supporting
3.	Amelanchier arborea	3	No	FACU	data in Remarks or on a separate shee	
4.	Zanthoxylum americanum	5	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Ex	colain)
5.	Rubus allegheniensis	3	No	FACU	<u> </u>	
6.	Agrimonia gryposepala	1	No	FACU	¹ Indicators of hydric soil and wetland hydrolog be present, unless disturbed or problematic.	gy must
7.					Definitions of Vegetation Strata:	
8.					_	
9.					Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of	
10.						•
11.					Sapling/shrub – Woody plants less than 3 in and greater than or equal to 3.28 ft (1 m) tall.	
12						
١	•	30	=Total Cover		Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tal	
Wo	oody Vine Stratum (Plot size: 20 radius)		, -10(a) 0000.			
1.	Celastrus orbiculatus	30	Yes	FACU	Woody vines – All woody vines greater than height.	3.28 ft in
2.	Parthenocissus quinquefolia	20	Yes	FACU	neight.	
3.	r armenociosus quinquorona			TAGG	Hydrophytic	
3. 4.					Vegetation Present? Yes No X	
→.		50	=Total Cover		riesent:	
_			•			
Re	emarks: (Include photo numbers here or on a separ	ate sheet.)				

VEGETATION Continued – Use scientific names of plants. Sampling Point: P42 Absolute Dominant Indicator Tree Stratum % Cover Species? Status **Definitions of Vegetation Strata:** 5____ No 8. Hamamelis virginiana FACU Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 9. Sapling/shrub - Woody plants less than 3 in. DBH 10. _____ and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 127 =Total Cover Sapling/Shrub Stratum 8. 9. _____ 73 =Total Cover Herb Stratum 21. 30 =Total Cover Woody Vine Stratum 7. 50 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

	ription: (Describe to	the depth nee				tor or co	onfirm the absence of i	ndicators.)	
Depth	Matrix			x Feature					
(inches)	Color (moist)		or (moist)	%	Type ¹	Loc ²	Texture	Remarks	i
0-20	10YR 4/3	100					Sandy		
									_
									_
									_
¹ Type: C=Co	ncentration, D=Deple	tion, RM=Redu	ced Matrix, N	մՏ=Mask	ked Sand	Grains.	² Location: PL=	Pore Lining, M=Matri	Χ.
Hydric Soil II	ndicators:						Indicators for	Problematic Hydric	Soils³:
Histosol ((A1)	Da	ark Surface ((S7)			2 cm Muck	(A10) (LRR K, L, ML	.RA 149B)
Histic Epi	pedon (A2)	Po	olyvalue Belo	ow Surfac	ce (S8) (I	RR R,	Coast Prai	rie Redox (A16) (LRR	K, L, R)
Black His	tic (A3)		MLRA 149B	3)			5 cm Muck	κy Peat or Peat (S3) (Ι	RR K, L, R)
Hydroger	Sulfide (A4)	Tł	nin Dark Surf	ace (S9)	(LRR R,	MLRA 1	1 49B) Polyvalue	Below Surface (S8) (L	.RR K, L)
Stratified	Layers (A5)	 Hi	gh Chroma S	Sands (S	11) (LRF	R K, L)	Thin Dark	Surface (S9) (LRR K,	L)
Depleted	Below Dark Surface	(A11) Lo	amy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Mang	anese Masses (F12) (LRR K, L, R)
	rk Surface (A12)		amy Gleyed				Piedmont	Floodplain Soils (F19)	(MLRA 149B)
Mesic Sp	odic (A17)		epleted Matri	-	,			nt Material (F21) (outs	
(MLRA	A 144A, 145, 149B)	R	edox Dark Si	urface (F	6)			ow Dark Surface (F22	
	ucky Mineral (S1)		epleted Dark					olain in Remarks)	•
	eyed Matrix (S4)		edox Depres		-			,	
Sandy Re			arl (F10) (LR	-	,		³ Indicators	of hydrophytic vegeta	ition and
	Matrix (S6)		ed Parent Ma		21) (MLR	RA 145)		hydrology must be pre	
—	(- /			•	, (-,		listurbed or problemati	
Restrictive L	ayer (if observed):							l l	
Type:	, , , , , , , , , , , , , , , , , , , ,								
Depth (in	ohoo):						Hydric Soil Present	2 Vaa	No. V
Deptil (iii			_				nyunc 3011 Fresent	? Yes	No <u>X</u>
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P43
Investigator(s): Kaitlin Rogers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W
	relief (concave, convex, none): None Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.673498	Long: -86.985318 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None
· · · · · · · · · · · · · · · · · · ·	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly disturb	
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) This point is in a suspect wetland area. This is a patch of Phragmites, between hydric.	veen the Calumet Trail and Southshore Rail Road tracks. Soils are fill and
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)Water-Stained Leaves (I	B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	- · · · · -
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4)Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No _x Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants.

Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
70 00101	- Ороскоз :	Otatas	
			Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
			Total Number of Dominant
			Species Across All Strata: 3 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC: 66.7% (A/B)
			Prevalence Index worksheet:
	=Total Cover		Total % Cover of: Multiply by:
			OBL species 5 x 1 = 5
5	Yes	FACW	FACW species 75 x 2 = 150
			FAC species43 x 3 =129
			FACU species 82 x 4 = 328
			UPL species12 x 5 =60
			Column Totals: 217 (A) 672 (B)
			Prevalence Index = B/A = 3.10
			Hydrophytic Vegetation Indicators:
5	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
	•		X 2 - Dominance Test is >50%
70	Yes	FACW	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.
			Definitions of Vegetation Strata:
			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		TAC	and greater than or equal to 5.20 ft (1 m) tall.
212	-Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
	- Total Cover		of size, and woody plants less than 3.20 it tall.
			Woody vines – All woody vines greater than 3.28 ft in height.
			neight.
			Hydrophytic
			Vegetation
	. <u></u>		Present?
	=Total Cover		
		5 Yes 5 =Total Cover 70 Yes 60 Yes 15 No 30 No 5 No 7 No 3 No 5 No 7 No 3 No 7 No 7 No 7 No	5 Yes FACW 5 =Total Cover 70 Yes FACU 15 No FACU 30 No FAC 5 No OBL 7 No FACU 3 No FAC 5 No UPL 3 No FAC 7 No UPL 7 No FAC

Sampling Point: P43

Profile Desc Depth	ription: (Describe to Matrix	the dep		ument tl x Featur		ator or co	onfirm the absence of	findicat	tors.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remar	ks
0-20									Gravel I	Fill
0-20									Olavoi	1 111
¹ Type: C=Co	oncentration, D=Deple	tion, RM	=Reduced Matrix, N	/IS=Mas	ked Sand	d Grains.	² Location: P	L=Pore I	Lining, M=Mat	trix.
Hydric Soil I	ndicators:						Indicators fo	r Probl	ematic Hydri	c Soils³:
Histosol			Dark Surface (-			2 cm Mu	ck (A10)) (LRR K, L, N	/ILRA 149B)
	pipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,			dox (A16) (LR	•
Black His			MLRA 149B							(LRR K, L, R)
	n Sulfide (A4)		Thin Dark Surf						Surface (S8)	
	Layers (A5)		High Chroma S						e (S9) (LRR I	· ·
	Below Dark Surface (A11)	Loamy Mucky			R K, L)		-) (LRR K, L, R)
	irk Surface (A12)		Loamy Gleyed		F2)				-	9) (MLRA 149B)
	oodic (A17)		Depleted Matri		·c)					tside MLRA 145
	A 144A, 145, 149B) lucky Mineral (S1)		Redox Dark Su Depleted Dark						rk Surface (F2 Remarks)	22)
	leyed Matrix (S4)		Redox Depress				Otilei (E.	хріант ін	ixemaiks)	
	edox (S5)		Marl (F10) (LR	•	0)		³ Indicato	rs of hyc	drophytic vege	etation and
	Matrix (S6)		Red Parent Ma		21) (MI F	RA 145)		-	ogy must be p	
					, (.	,		•	ed or problema	
Restrictive L	_ayer (if observed):									
Type:	,									
Depth (ir	nches).						Hydric Soil Preser	nt?	Yes	No X
							.,			 _
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P44
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W
	elief (concave, convex, none): None Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.673972	Long: -86.984817 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	
, ,	<u>——</u> ——
Are Vegetation, Soil, or Hydrologysignificantly disturb	
Are Vegetation, Soil, or Hydrology naturally problemat	
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No No	If yes, optional Wetland Site ID: Wetland 1
Remarks: (Explain alternative procedures here or in a separate report.) This point is in a wetland area north of the Calumet Trail, east of the Beverly dominated section. This area is part of the large wetland complex, Wetland	· · · · · · · · · · · · · · · · · · ·
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)
X Surface Water (A1) Water-Stained Leaves (B	9) Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C	C1) Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres or	n Living Roots (C3)Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron	n (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remarks	s)Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches):	1
Water Table Present? Yes X No Depth (inches):	0
Surface Water Present? Yes X No Depth (inches): Water Table Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches): (includes capillary fringe)	0 Wetland Hydrology Present? Yes X No
\	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	vious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P44 Absolute Dominant Indicator Tree Stratum (Plot size: 30 radius) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 75.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover OBL species Sapling/Shrub Stratum (Plot size: 20 radius) **FACW** species 79 x 2 = 1. 158 2. FAC species 0 x 3 = 3. FACU species 19 x 4 = 4. UPL species x 5 = 5. Column Totals: 187 (A) 323 6. Prevalence Index = B/A = 1.73 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10 X 20) X 2 - Dominance Test is >50% Phalaris arundinacea **FACW** X 3 - Prevalence Index is ≤3.0¹ 25 OBL 4 - Morphological Adaptations¹ (Provide supporting 2 Lythrum salicaria Yes data in Remarks or on a separate sheet) 3. Typha angustifolia 30 Yes OBL Thelypteris palustris 4. 7 **FACW** Problematic Hydrophytic Vegetation¹ (Explain) No 50 **FACW** 5. Onoclea sensibilis Yes ¹Indicators of hydric soil and wetland hydrology must 6. 7 OBL be present, unless disturbed or problematic. Symphyotrichum puniceum No 7 **FACU** 7. Poa pratensis No **Definitions of Vegetation Strata:** 8. Carex scoparia No **FACW** Tree – Woody plants 3 in. (7.6 cm) or more in 9 Sonchus asper 5 **FACU** diameter at breast height (DBH), regardless of height. No Solidago canadensis 7 No **FACU** Sapling/shrub - Woody plants less than 3 in. DBH Impatiens capensis 10 **FACW** and greater than or equal to 3.28 ft (1 m) tall. No 7 12. Eutrochium maculatum Nο OBL Herb - All herbaceous (non-woody) plants, regardless 187 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: 20 radius) Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3.

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

The vegetitation here, north of the Calument trail and just east of the Beverly shore train station is moderately degraded.

=Total Cover

Vegetation Present?

Yes X

VEGETATION Continued – Use scientific names of plants. Sampling Point: Absolute Dominant Indicator Tree Stratum % Cover Species? Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. =Total Cover Sapling/Shrub Stratum 8. 9. _____ 5 =Total Cover Herb Stratum 13. Mimulus ringens 5____ 7 _ _ 14. Ludwigia alternifolia No OBL 15. Carex vulpinoidea 5 No OBL 16. Symplocarpus foetidus 3 No OBL 19. _____ 21. _____ 187 =Total Cover Woody Vine Stratum 7. =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc Depth	ription: (Describe to Matrix	o the de	-	ument t l x Featur		ator or c	onfirm the absence of in	dicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/1	100					Mucky Loam/Clay	
4-12	10YR 3/1	90	10YR 5/6	10	C	M	Loamy/Clayey	
1 _{Tymax} C=Ca			4-Dadward Matrix N				21 apption: DI = 0	Dara Lining M-Matrix
Hydric Soil I	oncentration, D=Deple	ellon, Ri	vi=Reduced Matrix, N	/IS=IVIAS	ked Sand	d Grains.		Problematic Hydric Soils ³ :
Histosol			Dark Surface (S7)				(A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (LRR R,	Coast Prairi	e Redox (A16) (LRR K, L, R)
Black His	stic (A3)		MLRA 149B					Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Thin Dark Surf		-			elow Surface (S8) (LRR K, L)
	Layers (A5)		High Chroma S	-				urface (S9) (LRR K, L)
	Below Dark Surface	(A11)	X Loamy Mucky			R K , L)		nese Masses (F12) (LRR K, L, R)
	rk Surface (A12)		Loamy Gleyed		F2)			loodplain Soils (F19) (MLRA 149B)
	oodic (A17) A 144A, 145, 149B)		Depleted Matri X Redox Dark Su		:6)			Material (F21) (outside MLRA 145 w Dark Surface (F22)
	ucky Mineral (S1)		Depleted Dark					ain in Remarks)
	leyed Matrix (S4)		Redox Depress				Out (Explic	an in remarke)
	edox (S5)		Marl (F10) (LR	•	- /		³ Indicators of	of hydrophytic vegetation and
	Matrix (S6)		Red Parent Ma		21) (MLI	RA 145)		ydrology must be present,
							unless dis	sturbed or problematic.
	_ayer (if observed):							
Type:	- L V						Uhadaia Oail Baasaato	V V N-
Depth (in	icnes):						Hydric Soil Present?	Yes <u>X</u> No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P45					
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W					
• • • • • • • • • • • • • • • • • • • •	relief (concave, convex, none): None Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.6739108	Long:86.9848212					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam						
Command of The Interior - Attach site map showing sain						
Hydrophytic Vegetation Present? Yes No _X_	Is the Sampled Area					
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_					
Wetland Hydrology Present? Yes No _X_	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
This point is in the center of the Calumet Trail, just east of the Beverly Sho	res train station.					
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) Water-Stained Leaves (I						
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres						
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction ir	n Tilled Soils (C6) Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes No X Depth (inches):						
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes No _X					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Damarka						
Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point: P45 Absolute Dominant Indicator Tree Stratum (Plot size: 30 radius) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 radius) **FACW** species 0 x 2 = 1. 0 2. FAC species 0 x 3 = x 4 = 3. FACU species 20 4. UPL species x 5 = 5. Column Totals: 20 (A) 80 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 10 X 20) 2 - Dominance Test is >50% Festuca arundinacea **FACU** 3 - Prevalence Index is ≤3.0¹ Yes **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Plantago major data in Remarks or on a separate sheet) 3. Taraxacum officinale **FACU** 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. **Definitions of Vegetation Strata:** 7. 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 20 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: 20 radius) Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.) The vegetitation here, north of the Calument trail and just east of the Beverly shore train station is moderately degraded.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix			x Feature	es						
(inches)	Color (moist)	Colo	r (moist)	%	Type ¹	Loc ²	Texture	Rema	rks		
0-4								Gravel	Fill		
								Olavoi			
									_		
¹ Type: C=Co	ncentration, D=Deple	etion, RM=Reduc	ed Matrix, N	/IS=Mask	ced Sand	Grains.	² Location: PL	.=Pore Lining, M=Ma	atrix.		
Hydric Soil I	ndicators:						Indicators for Problematic Hydric Soils ³ :				
Histosol (A1)	Da	rk Surface (S7)			2 cm Muc	k (A10) (LRR K, L,	MLRA 149B)		
Histic Epi	pedon (A2)	Pol	lyvalue Belo	w Surfac	e (S8) (I	RR R,	Coast Pra	airie Redox (A16) (LI	RR K, L, R)		
Black His	tic (A3)	N	MLRA 149B)			5 cm Muc	ky Peat or Peat (S3) (LRR K, L, R)		
Hydroger	Sulfide (A4)	Thi	n Dark Surf	ace (S9)	(LRR R,	MLRA 1	49B) Polyvalue	Below Surface (S8)	(LRR K, L)		
Stratified	Layers (A5)	Hig	jh Chroma S	Sands (S	11) (LRF	R K, L)	Thin Dark	Surface (S9) (LRR	K, L)		
Depleted	Below Dark Surface	(A11)Loa	amy Mucky	Mineral (F1) (LRF	R K, L)	Iron-Mang	ganese Masses (F12	2) (LRR K, L, R)		
Thick Da	rk Surface (A12)	Loa	amy Gleyed	Matrix (F	- 2)		Piedmont	Floodplain Soils (F1	19) (MLRA 149B)		
Mesic Sp	odic (A17)	De	pleted Matri	x (F3)			Red Pare	nt Material (F21) (οι	ıtside MLRA 145)		
(MLRA	A 144A, 145, 149B)	Re	dox Dark Sι	ırface (F	6)		Very Shal	llow Dark Surface (F	22)		
Sandy Mi	ucky Mineral (S1)	De	pleted Dark	Surface	(F7)		Other (Ex	plain in Remarks)			
Sandy GI	eyed Matrix (S4)	Re	dox Depress	sions (F8	3)						
Sandy Re	edox (S5)	Ma	rl (F10) (LR	RK, L)			³ Indicators	s of hydrophytic veg	etation and		
Stripped	Matrix (S6)	Re	d Parent Material (F21) (MLRA 145)				wetland hydrology must be present,				
							unless	disturbed or problem	natic.		
Restrictive L	ayer (if observed):										
Type:			_								
Depth (in	ches):						Hydric Soil Present	t? Yes	No X		
Remarks:			_				-				
Remarks.											

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail Phase 2	City/County: Chesterton/ Porter County Sampling Date: 6/9/2022						
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P46						
Investigator(s): Kaitlin Rodgers and Lydia Loyd	Section, Township, Range: NE 1/4 SW 1/4 S24 T32N R6W						
• • • • • • • • • • • • • • • • • • • •							
· · · · · · · · · · · · · · · · · · ·	relief (concave, convex, none): None Slope %: 0						
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.673857	Long: <u>-86.984757</u> Datum: <u>NAD83</u>						
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrologysignificantly distur	bed? Are "Normal Circumstances" present? Yes X No						
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sam							
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area						
Hydric Soil Present? Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 2						
Remarks: (Explain alternative procedures here or in a separate report.) The point is in the wetland south of the Calumet Trail, east of the Beverly Shores train station in a sedge dominated section of wetland.							
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)						
X Surface Water (A1) Water-Stained Leaves (
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)						
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) X Oxidized Rhizospheres	· · · · · · · · · · · · · · · · · · ·						
Presence of Reduced In							
Algal Mat or Crust (B4)Recent Iron Reduction in Tilled Soils (C6)Geomorphic Position (D2)							
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)							
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4)							
Sparsely Vegetated Concave Surface (B8) X_FAC-Neutral Test (D5)							
Field Observations:							
Surface Water Present? Yes X No Depth (inches):							
Water Table Present? Yes X No Depth (inches):							
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? Yes X No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre							
Describe Recorded Data (stream gauge, monitoring well, aenai priotos, pre	evious irispections), ir available.						
Remarks:							

VEGETATION – Use scientific names of plants. Sampling Point: P46 Absolute Dominant Indicator Tree Stratum (Plot size: 30 radius) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 15 (A) 3. Total Number of Dominant 4. Species Across All Strata: 16 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 93.8% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 radius) 1. FACW species 28 x 2 = 56 4 2. FAC species x 3 = 3 3. FACU species x 4 = 12 4. UPL species x 5 = Column Totals: 118 (A) 163 6 Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%

٥.				
7.				
		5	=Total Cover	
Her	<u>b Stratum</u> (Plot size: 10 x 20 (along trail))			
1.	Carex lurida	20	Yes	OBL
2.	Symphyotrichum puniceum	7	Yes	OBL
3.	Phalaris arundinacea	7	Yes	FACW
4.	Lobelia cardinalis	1	No	OBL
5.	Glyceria striata	7	Yes	OBL
6.	Verbena hastata	5	Yes	FACW
7.	Lycopus uniflorus	5	Yes	OBL
8.	Typha angustifolia	5	Yes	OBL
9.	Juncus effusus	5	Yes	OBL
10.	Juncus dudleyi	5	Yes	FACW
11.	Lythrum salicaria	7	Yes	OBL
12.	Carex scoparia	5	Yes	FACW
		118	=Total Cover	
Wo	ody Vine Stratum (Plot size:20 radius)			
1.				
2.				
3.				
4.				
			=Total Cover	

be present, unless disturbed or problematic.
Definitions of Vegetation Strata:

X 3 - Prevalence Index is ≤3.0¹

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

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

Indicators of hydric soil and wetland hydrology must

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 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 vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes X

No ___

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

The vegetitation here, north of the Calument trail and just east of the Beverly shore train station is moderately degraded.

VEGETATION Continued – Use scientific names of plants. Sampling Point: P46 Absolute Dominant Indicator Tree Stratum % Cover Species? Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. =Total Cover Sapling/Shrub Stratum 8. 9. _____ 5 =Total Cover Herb Stratum 13. Juncus acuminatus 10 Yes OBL 14. Salix nigra 3 No OBL 5 ____ Yes ____ 15. Eupatorium perfoliatum **FACW** No ____ 16. Sonchus asper 3 FACU Yes _____ 17. Stachys palustris 5 OBL 18. Solanum dulcamara 3 No FAC 19. Alnus glutinosa 1 No FACW 3 __ No 20. Mimulus ringens OBL 21. Acer rubrum 1 No FAC 22. Ludwigia alternifolia 5 Yes OBL 24. _____ 118 =Total Cover Woody Vine Stratum 7. =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc Depth	ription: (Describe to Matrix	•	th needed to document the indicator or co Redox Features				of indicators.)				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		s	
0-4	10YR 2/1	100					Mucky Loam/Clay				
4-10	10YR 3/1	90	10YR 5/6	10	С	M	Loamy/Clayey				
10-18	10YR 4/1	80	10YR 5/6	20	С	M	Loamy/Clayey	Prominent redox concentrations			
¹Type: C=Co	oncentration, D=Deple	tion, RM	1=Reduced Matrix,	, MS=Mas	ked San	d Grains.			ining, M=Matri		
Hydric Soil I									matic Hydric		
Histosol			Dark Surface				2 cm Muck (A10) (LRR K, L, MLRA 149B)				
	pipedon (A2)		Polyvalue Below Surface (S8) (LRR R,				Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)				
Black His			MLRA 149B)					-		•	
	n Sulfide (A4)			Thin Dark Surface (S9) (LRR R, MLRA 1 High Chroma Sands (S11) (LRR K, L)							
	l Layers (A5)	(111)	X Loamy Muck				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)				
 :			Loamy Gleye	-		K K, L)	Piedmont Floodplain Soils (F19) (MLRA 149B)				
Thick Dark Surface (A12) Mesic Spodic (A17) X			X Depleted Ma		1 2)		Red Parent Material (F21) (outside MLRA 145)				
			X Redox Dark		·6)		Very Shallow Dark Surface (F22)				
Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)				Other (Explain in Remarks)					
Sandy Mucky Milleral (31) Sandy Gleyed Matrix (S4)			Redox Depre					.хрішіі і і і	tomanto		
			Marl (F10) (LRR K, L)				³ Indicate	ors of hydr	ophytic vegeta	ation and	
Sandy Redox (S5) Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 145)									
Outpped Matrix (OO)				viatoriai (i	, (unless disturbed or problematic.				
Restrictive L Type:	_ayer (if observed):										
Depth (in	nches):						Hydric Soil Prese	nt?	Yes X	No	
Remarks:											

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P47
Investigator(s): Kaitlin Rodgers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W
·	relief (concave, convex, none): Convex Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.674089	Long: -86.98488 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly distu	irbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	·
	mpling point locations, transects, important features, etc.
	T
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No X No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
The point is on a old road bed (Seneca Street) north of the exsiting Calum	net Trail. east of the Beverly Shores train station.
,	,
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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced Ir	
Algal Mat or Crust (B4) Recent Iron Reduction i	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	:
Water Table Present? Yes No Depth (inches):	: <u> </u>
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x14)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
	30	Yes	FACU	Dominance rest worksheet.		
Quercus rubra Prunus virginiana	15	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)		
	7			That Ale OBL, FACW, of FAC4 (A)		
Acer saccharinum Prunus serotina	10	No No	FACU	Total Number of Dominant		
4. Prunus serotina 5.		No	FACU	Species Across All Strata: 10 (B)		
				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC: 40.0% (A/B)		
7	62	=Total Cover		Prevalence Index worksheet:		
Sapling/Shrub Stratum (Plot size: 20x14)	02	- Fotal Cover		Total % Cover of: Multiply by: OBL species 10 x 1 = 10		
,	30	Voc	EACW/	<u> </u>		
1. Lindera benzoin	30	Yes Yes	FACU	' 		
2. Ligistrum vulgare		Yes	FACU	FAC species 20 x 3 = 60		
3. Lonicera X bella	15	Yes	FACU	FACU species 126 x 4 = 504		
4.				UPL species 8 x 5 = 40		
5.				Column Totals: 213 (A) 712 (B)		
6				Prevalence Index = B/A = 3.34		
7				Hydrophytic Vegetation Indicators:		
	75	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation		
Herb Stratum (Plot size: 10x14)				2 - Dominance Test is >50%		
Symplocarpus foetidus	10	Yes	OBL	3 - Prevalence Index is ≤3.0 ¹		
2. Solidago rugosa	10	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting		
3. Taraxacum officinale	5	No	FACU	data in Remarks or on a separate sheet)		
4. Elaeagnus umbellata	5	No	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)		
5. Parthenocissus quinquefolia	7	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must		
6. Dichanthelium acuminatum	7	Yes	FAC	be present, unless disturbed or problematic.		
7. Maianthemum canadense	7	Yes	FACU	Definitions of Vegetation Strata:		
8. Symphyotrichum lanceolatum	5	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in		
9. Juniperus virginiana	1	No	FACU	diameter at breast height (DBH), regardless of height.		
10. Fraxinus pennsylvanica	3	No	FACW	Sapling/shrub – Woody plants less than 3 in. DBH		
11. Carex pensylvanica	3	No	UPL	and greater than or equal to 3.28 ft (1 m) tall.		
12. Poa pratensis	5	No	FACU	Herb – All herbaceous (non-woody) plants, regardless		
	76	=Total Cover		of size, and woody plants less than 3.28 ft tall.		
Woody Vine Stratum (Plot size: 20x14)		•		Woody vines – All woody vines greater than 3.28 ft in		
1.				height.		
2.						
3.				Hydrophytic		
4.				Vegetation Present? Yes No X		
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa	rate sheet \					
This is on the old Frontage Road bedjust east of Broa						
,	•					

Sampling Point: P47

VEGETATION Continued – Use scientific names of plants. Sampling Point: P47 Absolute Dominant Indicator Tree Stratum % Cover Species? Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. _____ and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 62 =Total Cover Sapling/Shrub Stratum 8. 9. ____ 75 =Total Cover Herb Stratum 13. Onoclea sensibilis No FACW 14. Toxicodendron radicans 3 _ _ No _ _ FAC _____1 ____ No FACU 15. Carex swanii 16. Impatiens capensis 1 No FACW 17. _____ 19. ____ 21. _____ 76 =Total Cover Woody Vine Stratum 7. =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	ription: (Describe to	the de	pth needed to doc	ument tl	he indica	tor or co	onfirm the absence of i	ndicators.)	
Depth	Matrix			x Featur	es				
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Rem	arks
0-4	10YR 4/2	100					Sandy		
4-10	10YR 4/2	100					Sandy	Grave	el mix
¹ Type: C=Co	ncentration, D=Deple	 etion, RM	======================================	 ∕/S=Mas	ked Sand	—— I Grains.	² Location: PL=	Pore Lining, M=N	Matrix.
Hydric Soil I	ndicators:							Problematic Hyd	
Histosol (Dark Surface (S7)				(A10) (LRR K, L	
	ipedon (A2)		Polyvalue Belo		ce (S8) (I	RR R.		rie Redox (A16) (•
Black His			MLRA 149B		00 (00) (33) (LRR K, L, R)
	Sulfide (A4)		Thin Dark Surf	•	(I RR R	MIRA		Below Surface (S	
	Layers (A5)		High Chroma S		-			Surface (S9) (LR	
	Below Dark Surface	(Λ11)	Loamy Mucky	-					12) (LRR K, L, R)
		(A11)				、 κ, ∟)		•	
	rk Surface (A12)		Loamy Gleyed		F2)				F19) (MLRA 149B)
	odic (A17)		Depleted Matri		-0)				outside MLRA 145)
	A 144A, 145, 149B)		Redox Dark Su	-	-			ow Dark Surface	(F22)
	ucky Mineral (S1)		Depleted Dark				Other (Exp	lain in Remarks)	
	eyed Matrix (S4)		Redox Depres	•	8)		3, ,,		
	edox (S5)		Marl (F10) (LR					of hydrophytic ve	
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)		hydrology must b isturbed or proble	
Restrictive L	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present?	Yes	No <u>X</u>
Remarks:	and had. Croval atort	ina at 1 i	nahaa						
Fill Holli old I	oad bed. Gravel start	ilig at 4 i	niches.						

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P48					
Investigator(s): Kaitlin Rodgers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W					
·	relief (concave, convex, none): Concave Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.67418	Long: -86.984934 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology significantly distu						
Are Vegetation, Soil, or Hydrology naturally problem						
SUMMART OF FINDINGS - Attach Site map showing san	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
This point is in the hydromesophytic swamp forest north of Service Avenu	e, an abandonded road.					
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) Water-Stained Leaves (<u> </u>					
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor						
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced In	- · · · -					
Algal Mat or Crust (B4) Recent Iron Reduction i						
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No Depth (inches):	:					
Water Table Present? Yes X No Depth (inches):						
Saturation Present? Yes X No Depth (inches):						
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants.

Tree Stratum (Diet size) 20	Absolute	Dominant	Indicator	Dominanaa Taat waalkahaati			
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Alnus glutinosa	20	Yes	FACW	Number of Dominant Species			
2. Quercus bicolor	7	No No	FACW	That Are OBL, FACW, or FAC: 8 (A)			
3. Acer rubrum	10	No	FAC	Total Number of Dominant			
4. Fraxinus pennsylvanica	30	Yes	FACW	Species Across All Strata: 8 (B)			
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC:100.0%(A/B)			
7				Prevalence Index worksheet:			
	67	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 20)				OBL species 61 x 1 = 61			
1. Ilex verticillata	60	Yes	FACW	FACW species 205 x 2 = 410			
2. Toxicodendron vernix	7	No	OBL	FAC species18 x 3 =54			
3. Sambucus nigra	7	No	FACW	FACU species 0 x 4 = 0			
4. Lindera benzoin	15	No	FACW	UPL species 0 x 5 = 0			
5.				Column Totals: 284 (A) 525 (B)			
6.				Prevalence Index = B/A = 1.85			
7.				Hydrophytic Vegetation Indicators:			
	89	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		•		X 2 - Dominance Test is >50%			
Symplocarpus foetidus	25	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹			
Fraxinus pennsylvanica	5	No	FACW	4 - Morphological Adaptations (Provide supporting			
Osmundastrum cinnamomeum	30	Yes	FACW	data in Remarks or on a separate sheet)			
4. Impatiens capensis	15	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
5. Persicaria arifolia	7	No	OBL	- 			
6. Bidens connata	3	No	FACW	 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 			
7. Leersia oryzoides	7	No No	OBL	Definitions of Vegetation Strata:			
8. Onoclea sensibilis		No	FACW				
9. Eupatorium purpureum	3	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
10. Glyceria striata	10	No	OBL	-			
11. Phalaris arundinacea	3	No No	FACW	 Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 			
12. Solidago patula	5	No	OBL				
12. Solidago patara	120	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size: 20)							
1. Solanum dulcamara	5	Yes	FAC	Woody vines – All woody vines greater than 3.28 ft in height.			
Ranunculus recurvatus	3	Yes	FACW	g.m			
3.			17.00	Hydrophytic			
4.				Vegetation Present? Yes X No			
T	8	=Total Cover		11000m: 100 <u>X</u> NO			
Demarke: (Include photo pumbare here er er							
Remarks: (Include photo numbers here or on a separ	ate sneet.)						

Sampling Point: P48

VEGETATION Continued – Use scientific names of plants. Sampling Point: P48 Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 67 =Total Cover Sapling/Shrub Stratum 9. ____ 89 =Total Cover Herb Stratum 21. _____ 120 =Total Cover Woody Vine Stratum 7. 8 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

	Color (moist) % Color (moist) % Type Loc Texture Remin	Profile Descr	ription: (Describe to	the depth ne	eded to doc	ument th	ne indica	tor or co	onfirm the absence of indicat	iors.)	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	10	Depth	Matrix			x Feature	es				
12-18	12-18	(inches)	Color (moist)	<u></u> Co	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	12-18 10YR 5/4 100 Sandy Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pl=Pore Lining, M=M Indicators for Problematic Hyd Indicators for Problematic Hyd 2 cm Muck (A10) (LRR K, L) Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L) Extractified Layers (A5) MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR R, L) Extractified Layers (A5) High Chroma Sands (S11) (LRR K, L) Inon-Manganese Masses (F1) Thick Dark Surface (A12) Loamy Gleyed Matrix (F2) Pledmont Floodplain Soils (F2) Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (MLRA 144A, 145, 149B) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _ X	0-8	10YR 2/1	100					Muck		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) X Histic Epipedon (A2) Dark Surface (S7) Dark Surface (S8) (LRR R, Constitution Con	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Slack Histic (A3) Dark Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Mesic Spodic (A17) Mesic Spodic (A17) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Marl (F10) (LRR K, L) Sandy Redox (S5) Marl (F10) (LRR K, L) Marl (F21) (MLRA 1445) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 1445) Redox Dark Surface (F7) Sandy Redox (S5) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Wetland Hydrology must be unless disturbed or probler Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _ X	8-12	10YR 2/1	100					Mucky Sand		
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) X Histic Epipedon (A2) Dark Surface (S8) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thic Dark Surface (S9) (LRR R, MLRA 149B) Depleted Below Dark Surface (A11) High Chroma Sands (S11) (LRR K, L) Thic Dark Surface (S9) (LRR K, L) Thic Dark Surface (S9) (LRR K, L) Thic Dark Surface (S9) (LRR K, L) Thic Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Mesic Spodic (A17) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Pollyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LR K, L, MLRA 149B) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR R, L) Thick Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (O (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _X	12-18	10YR 5/4	100					Sandy		
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histosol (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, L) High Chroma Sands (S11) (LRR K, L) Thick Dark Surface (A12) Mesic Spodic (A17) Mesic Spodic (A17) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Pollyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LR K, L, MLRA 149B) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR R, L) Thick Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (O (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _X				_						
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Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Redox Depressions (F8) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LX Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR R, MLRA 149B) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Mesic Spodic (A17) Mesic Spodic (A17) Mesic Spodic (A17) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Marl (F10) (LRR K, L) Sandy Redox (S5) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X			tion, Kivi–Kedi	uceu iviatrix, i	vio-iviasi	Neu Sanc	Giailis.			
X Histic Epipedon (A2)	X Histic Epipedon (A2)	-		Г	ark Surface ((S7)				-	
XBlack Histic (A3)MLRA 149B)5 cm Mucky Peat or Peat (S3) (LRR K, L, R)Hydrogen Sulfide (A4)Thin Dark Surface (S9) (LRR R, MLRA 149B)Polyvalue Below Surface (S8) (LRR K, L)Stratified Layers (A5)High Chroma Sands (S11) (LRR K, L)Thin Dark Surface (S9) (LRR K, L)Depleted Below Dark Surface (A11)Loamy Mucky Mineral (F1) (LRR K, L)Iron-Manganese Masses (F12) (LRR K, L, R)Thick Dark Surface (A12)Loamy Gleyed Matrix (F2)Piedmont Floodplain Soils (F19) (MLRA 149B)Mesic Spodic (A17)Depleted Matrix (F3)Red Parent Material (F21) (outside MLRA 145)(MLRA 144A, 145, 149B)Redox Dark Surface (F6)Very Shallow Dark Surface (F22)Sandy Mucky Mineral (S1)Depleted Dark Surface (F7)Other (Explain in Remarks)Sandy Redox (S5)Marl (F10) (LRR K, L)3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):Type:Depth (inches):Hydric Soil Present?Yes X No	X Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S2 Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8 Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRF Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F1 Thick Dark Surface (A12) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F2 Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (or (MLRA 144A, 145, 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F3 Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) 3Indicators of hydrophytic very Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be unless disturbed or problem Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _X						ce (S8) (I	LRR R.			
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Stratified Layers (A5)	Stratified Layers (A5)			Т		,	(LRR R	. MLRA 1			-,
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Matrix (F2) Matrix (F3) Red Parent Material (F21) (outside MLRA 145) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F1) (LRR K, L) Mesic Spodic (A17) Red Parent Material (F21) (One of the company of the										
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Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (outside MLRA 145) Marl (F10) (LRR K, L) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Redox Dark Surface (F7) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR K, L) Wetland hydrology must be unless disturbed or problem Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X							, ,			
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Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be unless disturbed or problem Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _X					-	•		³ Indicators of hyd	drophytic vegetation and	
Depth (inches): unless disturbed or problematic. Hydric Soil Present? Yes X No	Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X						21) (MLF	RA 145)			
Type:	Type: Depth (inches): Hydric Soil Present? Yes _ X					•					
Depth (inches): Hydric Soil Present? Yes X No	Depth (inches): Hydric Soil Present? Yes _ X		.ayer (if observed):								
		_							Hudria Cail Brasanto	Vac V Na	
Remarks:	Remarks:								Hydric Soil Present?	NO	
		Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P49				
Investigator(s): Kaitlin Rodgers, Lyida Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): Convex Slope %: 1				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.675308	Long: -86.983153 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A				
· · · · · · · · · · · · · · · · · · ·					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.				
Lludraphitia Variation Present?	Is the Complet Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes No X	Is the Sampled Area within a Wetland? Yes No X_				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
	ii yoo, optional Fronting One is.				
Remarks: (Explain alternative procedures here or in a separate report.) The point is on a North South road bed, old Manning Ave.					
The point is on a North Count road bod, old Maining 7.40.					
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) Water-Stained Leaves (_				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	,				
Drift Deposits (B3) Presence of Reduced In					
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No Depth (inches):					
Water Table Present? Yes No Depth (inches):					
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants.

nts.			Sampling Point: P49			
Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
30	Yes	FACU	Number of Dominant Species			
10	No	FACU	That Are OBL, FACW, or FAC:5 (A)			
15	Yes	FACW	Total Number of Dominant			
			Species Across All Strata: 9 (B)			
			Percent of Dominant Species			
			That Are OBL, FACW, or FAC:55.6% (A/B)			
			Prevalence Index worksheet:			
55	=Total Cover		Total % Cover of: Multiply by:			
	•		OBL species 5 x 1 = 5			
7	No	FACU	FACW species 69 x 2 = 138			
30	Yes	UPL	FAC species 70 x 3 = 210			
25	Yes	FACW	FACU species 77 x 4 = 308			
			UPL species 30 x 5 = 150			
			Column Totals: 251 (A) 811 (B			
			Prevalence Index = B/A = 3.23			
			Hydrophytic Vegetation Indicators:			
62	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
	•		X 2 - Dominance Test is >50%			
60	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹			
10	Yes		4 - Morphological Adaptations ¹ (Provide supporting			
7	No		data in Remarks or on a separate sheet)			
7	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
10	Yes	FACW				
7	No	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
 5	No No	OBL	Definitions of Vegetation Strata:			
10	Yes	FACU				
5	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height			
3	No	FACU	Sanling/abruh Woody plants loss than 3 in DDL			
10	Yes	FAC	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
134	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
	•					
			Woody vines – All woody vines greater than 3.28 ft in height.			
			Hydrophytic			
			Vegetation Present? Yes X No			
	Absolute % Cover 30 10 15 55 7 30 25 62 60 10 7 7 10 7 5 10 5 3 3	Absolute % Cover Species? 30 Yes 10 No 15 Yes 55 =Total Cover 7 No 30 Yes 25 Yes 62 =Total Cover 60 Yes 10 Yes 7 No 7 No 7 No 7 No 10 Yes 7 No 5 No 10 Yes 5 No 10 Yes 5 No 10 Yes	Absolute % Cover Dominant Species? Indicator Status 30 Yes FACU 10 No FACU 15 Yes FACW 55 =Total Cover 7 No FACU 30 Yes UPL 25 Yes FACW 60 Yes FACU 7 No FACW 7 No FACW 7 No FACW 7 No FACW 5 No OBL 10 Yes FACU 5 No FACW 5 No FACW 5 No FACW 5 No FACW 10 Yes FACU 10 Yes FACU			

Profile Desc Depth	cription: (Describe to Matrix	o the de	-	ocument t dox Featur		ator or c	onfirm the absence o	f indicator	rs.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	ks
0-8	10YR 3/3	100					Sandy			
8-15	10YR 3/4	95	10YR 6/3	5	C	M	Sandy	Distin	ıct redox coı	ncentrations
							·			
	oncentration, D=Deple	etion, RI	/I=Reduced Matrix	k, MS=Mas	ked San	d Grains.	² Location: P			
Hydric Soil			Davida Occur	- (07)			Indicators fo		_	
— Histosol	(A1) pipedon (A2)		Dark Surface Polyvalue B		00 (50) (I DD D				MLRA 149B)
Black Hi			MLRA 14		ce (36) (LKK K,			ox (A16) (LR or Peat (S3)	(LRR K, L, R)
	n Sulfide (A4)		Thin Dark S	-) (LRR R	. MLRA		-	urface (S8)	
	l Layers (A5)		High Chrom						(S9) (LRR)	
	Below Dark Surface	(A11)	Loamy Muc	-) (LRR K, L, R)
Thick Da	ark Surface (A12)		Loamy Gley	ed Matrix ((F2)		Piedmon	ıt Floodplai	in Soils (F19	9) (MLRA 149B)
	oodic (A17)		Depleted Ma							tside MLRA 145)
	A 144A, 145, 149B)		Redox Dark	-					Surface (F2	22)
	lucky Mineral (S1)		Depleted Da		` '		Other (E	xplain in R	lemarks)	
	ileyed Matrix (S4) ledox (S5)		Marl (F10) (•	0)		³ Indicato	ors of hydro	ophytic vege	etation and
	Matrix (S6)		Red Parent	-	21) (ML	RA 145)			gy must be p	
— ''	(- 7		_	`	, (-,			or problema	
Restrictive I	Layer (if observed):									
Type:										
Depth (ir	nches):						Hydric Soil Preser	nt?	Yes	No X
Remarks:							,L			
Gravel startir	ng at 4".									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P50
Investigator(s): Kaitlin Rodgers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: Se 1/4 NW 1/4 S10 T37N R5W
	relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.67532	Long: -86.983207 Datum: NAD83
Soil Map Unit Name: Mn - Maaumee loamy sand	NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.
Lludraphytia Vagatation Procent2	In the Complet Area
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This point is in the hydromesophytic swamp forest west of Manning Avenue	e (abandonded), in the area east of Beverly Shores train station.
	,
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)
X Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) X_ Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5)Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches):	
Water Table Present? Yes X No Depth (inches):	
Saturation Present? Yes X No Depth (inches):	0 Wetland Hydrology Present? YesX No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	avious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P50 Indicator Absolute Dominant Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** 1. Acer saccharinum 30 Yes **FACW Number of Dominant Species** 2. 40 FAC Nyssa sylvatica Yes That Are OBL, FACW, or FAC: 3. **Total Number of Dominant** 4. Species Across All Strata: 6 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: 70 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: OBL species x 1 = FACW FACW species 142 x 2 = 284 llex verticillata 40 Yes 2. Lindera benzoin 25 Yes **FACW** FAC species 45 x 3 = 135 3. 3 FACU species x 4 = 12

4				UPL species0 x 5 =0				
5		_		Column Totals: 257 (A) 498 (B)				
6.		<u> </u>		Prevalence Index = B/A =1.94				
7		_		Hydrophytic Vegetation Indicators:				
_	65	_=Total Cover		1 - Rapid Test for Hydrophytic Vegetation				
Herb Stratum (Plot size:10)				X 2 - Dominance Test is >50%				
1. Osmundastrum cinnamomeum	30	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹				
2. Saururus cernuus	60	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supportin				
3. Carex stipata	7	No	OBL	data in Remarks or on a separate sheet)				
4. Impatiens capensis	10	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)				
5. Onoclea sensibilis	7	No	FACW	¹ Indicators of hydric soil and wetland hydrology must				
6. Anemone quinquefolia	3	No	FACU	be present, unless disturbed or problematic.				
7. Equisetum arvense	5	No	FAC	Definitions of Vegetation Strata:				
8				Tree – Woody plants 3 in. (7.6 cm) or more in				
9				diameter at breast height (DBH), regardless of height.				
10				Sapling/shrub – Woody plants less than 3 in. DBH				
11		_		and greater than or equal to 3.28 ft (1 m) tall.				
12				Herb – All herbaceous (non-woody) plants, regardless				
_	122	=Total Cover		of size, and woody plants less than 3.28 ft tall.				
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft ir				
1				height.				
2								
3				Hydrophytic Vegetation				
4.				Present? Yes X No				

=Total Cover

Remarks: (Include photo numbers here or on a separate sheet.) This point is in the hydriomesophutic swamp forest.

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ıment tl	ne indica	ator or co	onfirm the absence of i	ndicators.)	
Depth	Matrix		Redox	k Featur	es				
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Rema	ırks
0-4	10YR 2/1	100					Muck		
4-12	10YR 5/2	100					Mucky Sand		
12-18	10YR 5/2	90	10YR 5/8	10	С	M	Sandy	Prominent redox	concentrations
¹Type: C=Co	oncentration, D=Deple	etion RM	======================================	 IS=Mas	ked Sand	d Grains	² l ocation: Pl =	Pore Lining, M=M	atrix
Hydric Soil I								Problematic Hydi	
Histosol (Dark Surface (S7)				(A10) (LRR K, L ,	
Histic Ep	ipedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (LRR R,	Coast Prai	rie Redox (A16) (L	RR K, L, R)
Black His	stic (A3)		MLRA 149B	•				xy Peat or Peat (S3	B) (LRR K, L, R)
	n Sulfide (A4)		Thin Dark Surfa					Below Surface (S8	
	Layers (A5)		High Chroma S					Surface (S9) (LRR	
	Below Dark Surface	(A11)	Loamy Mucky I			R K, L)		anese Masses (F1	
	rk Surface (A12)		Loamy Gleyed		F2)			Floodplain Soils (F	
	odic (A17) A 144A, 145, 149B)		Depleted Matrix Redox Dark Su		:6)			ow Dark Surface (F	utside MLRA 145)
	ucky Mineral (S1)		Depleted Dark	-	-			olain in Remarks)	22)
	leyed Matrix (S4)		Redox Depress				Out of (Exp	nam m remane)	
	edox (S5)		Marl (F10) (LR		- /		³ Indicators	of hydrophytic veg	etation and
	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)		hydrology must be	
							unless d	isturbed or probler	natic.
	.ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present	? Yes <u>X</u>	No
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton / Porter Country Sampling Date: 6/17/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P51					
Investigator(s): Kaitlin Rodgers, Lyida Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W					
	relief (concave, convex, none): Convex Slope %: 3					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.676628	Long: -86.982376 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrologysignificantly distur	rbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.					
Lludraphytia Vagatation Procent2	In the Complet Area					
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes No X	Is the Sampled Area within a Wetland? Yes No _X_					
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
This point is in an unnamed abandonded road. The new trail is planned to	run on this road bed.					
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) Water-Stained Leaves (B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres						
Drift Deposits (B3) Presence of Reduced In						
Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Thin Muck Surface (C7)	· / = · · · · ·					
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:	A PAO-Neutral Pest (BO)					
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches):						
Saturation Present? Yes No X Depth (inches):						
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants.

Tree Stratum (Diet size) 20	Absolute	Dominant	Indicator	Dominanaa Taat waalkabaati
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Prunus serotina	25	Yes	FACU	Number of Dominant Species
2. <u>Ulmus americana</u>	20	Yes	FACW	That Are OBL, FACW, or FAC:7 (A)
3.				Total Number of Dominant
4.		· ——		Species Across All Strata: 9 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 77.8% (A/B)
7	45	T-1-1 0		Prevalence Index worksheet:
Cardina/Charle Charles (Distains)	45	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)	40	Vaa	EA C)A/	OBL species 5 x 1 = 5
1. Lindera benzoin	40	Yes	FACW	FACW species 77 x 2 = 154
2.				FAC species 57 x 3 = 171
3.				FACU species 35 x 4 = 140
4		· ——		UPL species 7 x 5 = 35
5.				Column Totals: 181 (A) 505 (B)
6.				Prevalence Index = B/A = 2.79
7				Hydrophytic Vegetation Indicators:
	40	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)				X 2 - Dominance Test is >50%
1. Carex blanda	25	Yes	<u>FAC</u>	3 - Prevalence Index is ≤3.0 ¹
2. Oxalis dillenii	3	<u>No</u>	FACU	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
3. Glyceria striata	5	No	OBL	
4. Lindera benzoin	7	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Viola sororia	5	No	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must
6. Symphyotrichum lateriflorum	5	No	FAC	be present, unless disturbed or problematic.
7. Arisaema triphyllum	7	Yes	FAC	Definitions of Vegetation Strata:
8. Alliaria petiolata	1	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Impatiens capensis	3	No	FACW	diameter at breast height (DBH), regardless of height.
10. Persicaria virginiana	5	No	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
11. Carex pensylvanica	7	Yes	UPL	and greater than or equal to 3.28 ft (1 m) tall.
12. Packera aurea	7	Yes	FACW	Herb – All herbaceous (non-woody) plants, regardless
	86	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:10)				Woody vines – All woody vines greater than 3.28 ft in
1. Vitis riparia	10	Yes	FAC	height.
2				Hydrophytic
3.				Vegetation
4.				Present? Yes X No
	10	=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
				Vegetation

Sampling Point: P51

VEGETATION Continued – Use scientific names of plants. Sampling Point: P51 Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. _ Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH 10. and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 45 =Total Cover Sapling/Shrub Stratum 8. 9. ____ 40 =Total Cover Herb Stratum 13. Erigeron annuus 3 _ _ FACU 14. Agrimonia gryposepala No 16. _____ 21. _____ 86 =Total Cover Woody Vine Stratum 7. 10 =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

	ription: (Describe to	the depth				tor or co	onfirm the absence of indicators	i.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 4/3	100					Sandy	Gravel Fill
8-16	10YR 4/4	100					Sandy	
¹ Type: C=Co	ncentration, D=Deple	tion, RM=F	Reduced Matrix, N	ΛS=Masl	ked Sand	Grains.	² Location: PL=Pore Lining	
Hydric Soil I							Indicators for Problema	•
Histosol (•	_	Dark Surface (RR K, L, MLRA 149B)
	pedon (A2)	_	_ Polyvalue Belo		ce (S8) (I	RR R,	Coast Prairie Redox	. , , , , , , , , , , , , , , , , , , ,
Black His			MLRA 149B	,	(I DD D			Peat (S3) (LRR K, L, R)
	Sulfide (A4)	_	_ Thin Dark Surf				· · · · · · · · · · · · · · · · · · ·	face (S8) (LRR K, L)
	Layers (A5)		High Chroma S				Thin Dark Surface (S	
	Below Dark Surface rk Surface (A12)	(ATT) _	_Loamy Mucky			(K, L)		sses (F12) (LRR K, L, R) Soils (F19) (MLRA 149B)
	odic (A17)	_	Loamy Gleyed Depleted Matri	-	F2)			(F21) (outside MLRA 145)
	A 144A, 145, 149B)	_	Redox Dark Su		6)		Very Shallow Dark S	
	ucky Mineral (S1)	_	Depleted Dark				Other (Explain in Re	
	eyed Matrix (S4)	_	Redox Depres					
Sandy Re		_	 Marl (F10) (LR	-	,		³ Indicators of hydrop	hytic vegetation and
Stripped I	Matrix (S6)		Red Parent Ma		21) (MLR	A 145)	wetland hydrology	
							unless disturbed o	r problematic.
Restrictive L	ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Present?	Yes No _X_
Remarks:								
Gravel Fill be	ginning at 3".							

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P52					
Investigator(s): Kaitlin Rodgers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W					
	relief (concave, convex, none): Concave Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.67668	Long: -86.982379 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrologysignificantly distur	rbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.					
Lludranh, dia Variatatian Drasanto	In the Complet Area					
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 1					
	in you, optional violatia one is.					
Remarks: (Explain alternative procedures here or in a separate report.) This point is in the hydromesophytic swamp forest that is part of Wetland '	1. This point is north of an old unnamed roadbed					
This point is in the hydronicsophytic swamp lorest that is part of wedaria	1. The point is north of an old annumed readbed.					
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) Water-Stained Leaves (<u> </u>					
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) X Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction in	n in Tilled Soils (C6) Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	rks)Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes X No Depth (inches):	8					
Saturation Present? Yes X No Depth (inches):	0 Wetland Hydrology Present? YesX No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
<u> </u>						
Remarks:						

VEGETATION – Use scientific names of plants.

			Sampling Point: P52
% Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
30	Yes	FACW	Number of Dominant Species
20	Yes	FACW	That Are OBL, FACW, or FAC: 7 (A)
15	Yes	FACW	Total Number of Dominant
			Species Across All Strata: 7 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC: 100.0% (A/B
			Prevalence Index worksheet:
65	=Total Cover		Total % Cover of: Multiply by:
			OBL species87
30	Yes	FACW	FACW species 155 x 2 = 310
50	Yes	FACW	FAC species18 x 3 =54
			FACU species3 x 4 =12
			UPL species0 x 5 =0
			Column Totals: 263 (A) 463 (B
			Prevalence Index = B/A =1.76
			Hydrophytic Vegetation Indicators:
80	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
75	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹
7	No	OBL	4 - Morphological Adaptations ¹ (Provide supporting
10	No	FACW	data in Remarks or on a separate sheet)
5	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
3	No	FACU	be present, unless disturbed or problematic.
3	No	FAC	Definitions of Vegetation Strata:
			Tree – Woody plants 3 in. (7.6 cm) or more in
	·		diameter at breast height (DBH), regardless of height
	·		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	·		
108	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
100	- Total Gover		
10	Yes	FAC	Woody vines – All woody vines greater than 3.28 ft in height.
			no.gra.
	· ——		Hydrophytic
			Vegetation
			Present? Yes X No
	30 20 15 65 30 50 50 7 10 5 5 3	Absolute % Cover Dominant Species? 30 Yes 20 Yes 15 Yes 65 =Total Cover 30 Yes 50 Yes 7 No 10 No 5 No 3 No 3 No 108 =Total Cover	Absolute % Cover Dominant Species? Indicator Status 30 Yes FACW 20 Yes FACW 15 Yes FACW 65 =Total Cover 30 Yes FACW 50 Yes FACW 75 Yes OBL 7 No OBL 10 No FACW 5 No OBL 5 No FAC 3 No FACU 3 No FAC

Color (moist) % Color (moist) % Type Loc* Texture Remarks	Profile Desc Depth	cription: (Describe to Matrix	the de		cument t lox Featur		ator or co	onfirm the absence o	f indicators.)		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	R	.emarks	
12-20	0-2	10YR 2/1	100					Mucky Sand			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1	2-12	10YR 2/1	85	10YR 6/8	15	C	M	Sandy	Prominent re	dox concentrati	ons
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Mesodo Dark Surface (F6) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Mesic Spotic (Indicators for Problematic Hydric Soils 3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Follyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Wery Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	12-20	10YR 4/3	100					Sandy			
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Mesodo Dark Surface (F6) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Mesic Spotic (Indicators for Problematic Hydric Soils 3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Follyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Wery Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No											
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Mesodo Dark Surface (F6) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Mesic Spotic (Indicators for Problematic Hydric Soils 3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Follyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Wery Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No										·	
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Mesodo Dark Surface (F6) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Red Parent Material (F21) (MLRA 145) Stripped Matrix (S6) Marl (F10) (LRR K, L) Red Parent Material (F21) (MLRA 145) Mesic Spotic (Indicators for Problematic Hydric Soils 3: 2 cm Muck (A10) (LRR K, L, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Follyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145) Wery Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No											
Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Dark Surface (S8) (LRR R, Histosol (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) Depleted Matrix (F3) Mesh 144A, 145, 149B) Redox Dark Surface (F6) X Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Red Parent Material (F21) (MLRA 145) Red Parent Material (F21) (MLRA 145) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Polyvalue Below Cark K, L, MLRA 149B) Polyvalue Below Surface (A16) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (F12) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (A12) Loamy Mucky Mineral (F11) (LRR K, L) Red Parent Material (F21) (MLRA 149B) Red Parent Material (F21) (MLRA 145) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No											
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Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No						:21\ /M L I	DA 145)				
Restrictive Layer (if observed): Type:	Stripped	Matrix (50)		Ned Falentin	viateriai (i	21) (IVILI	(A 140)				
Depth (inches): Hydric Soil Present? Yes X No	Restrictive I	Layer (if observed):							·		
	Type:										
Remarks:	Depth (ir	nches):						Hydric Soil Preser	nt? Yes	XNo	
	Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P53				
Investigator(s): Kaitlin Rodgers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W				
' '	relief (concave, convex, none): Concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.676542	Long: -86.980434 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrology naturally problem.	<u></u>				
	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No Yes X	Is the Sampled Area				
Hydric Soil Present? Wetland Hydrology Present? Yes X No Yes X No	within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland 1				
	il yes, Optional Welland Oile ID. Wolland 1				
Remarks: (Explain alternative procedures here or in a separate report.) This point is in Wetland 1 in an area where the trail will go through hydrom	nesonhytic swamn forest				
This polities in Wedand Thi an area where the dan win go dheagh nystem	lesoprific swamp rolest.				
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) Water-Stained Leaves (<u> </u>				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor					
Sediment Deposits (B2) X Oxidized Rhizospheres	· , · · · · · · · · · · · · · · · · · ·				
Drift Deposits (B3) Presence of Reduced Ir					
Algal Mat or Crust (B4) Recent Iron Reduction i					
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No X Depth (inches):					
Water Table Present? Yes X No Depth (inches):					
Saturation Present? Yes X No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Nyssa sylvatica	40	Yes	FAC	Number of Dominant Species			
2. Acer rubrum	30	Yes	FAC	That Are OBL, FACW, or FAC:7 (A)			
3. Fraxinus pennsylvanica	25	Yes	FACW	Total Number of Dominant			
4				Species Across All Strata: 8 (B)			
5				Percent of Dominant Species			
6				That Are OBL, FACW, or FAC: 87.5% (A/B)			
7				Prevalence Index worksheet:			
	95	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size:)				OBL species105 x 1 =105			
Aronia melanocarpa	7	No	FAC	FACW species 115 x 2 = 230			
2. Lindera benzoin	30	Yes	FACW	FAC species87 x 3 =261			
3. Ulmus americana	5	No	FACW	FACU species 0 x 4 = 0			
4.				UPL species 5 x 5 = 25			
5.				Column Totals: 312 (A) 621 (B)			
6.				Prevalence Index = B/A = 1.99			
7.				Hydrophytic Vegetation Indicators:			
	42	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		•		X 2 - Dominance Test is >50%			
1. Saururus cernuus	40	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹			
Glyceria striata	10	No	OBL	4 - Morphological Adaptations ¹ (Provide supporting			
Onoclea sensibilis	40	Yes	FACW	data in Remarks or on a separate sheet)			
4. Impatiens capensis	10	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
5. Symplocarpus foetidus	30	Yes	OBL	- 			
6. Carex stipata	5	No	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7. Cuscuta gronovii	5	No	UPL	Definitions of Vegetation Strata:			
8. Cicuta maculata		No	OBL				
9. Leersia oryzoides	 10	No No	OBL	 Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 			
10. Equisetum arvense	10	No No	FAC	-			
11. Laportea canadensis	5	No No	FACW	 Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 			
12. Solidago patula	3	No	OBL				
12. Solidayo patula	 175	=Total Cover	OBL	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size: 20)	173	- Total Cover					
	10	Yes		Woody vines – All woody vines greater than 3.28 ft in height.			
		163		neight.			
2. 3.		· ——		Hydrophytic			
		·		Vegetation			
4		T-4-1 0		Present?			
	10	=Total Cover					
Remarks: (Include photo numbers here or on a separ	ate sheet.)						

Sampling Point: P53

Profile Desc Depth	ription: (Describe to Matrix	o the de		ument th		ator or co	onfirm the absence of	f indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 2/1	100					Muck			
4-10	10YR 2/1	85	10YR 6/8	15	С	M	Mucky Sand	Prominent redox concentrations		
10-18	10YR 5/2	100					Sandy			
10 10	10111 0/2						Carray			
	-									
							·			
¹Type: C=Co	ncentration, D=Deple	etion RN	 ∕I=Reduced Matrix ↑	MS=Mas	ked Sand		² Location: P	L=Pore Lining, M=Matrix.		
Hydric Soil I		ouon, rui	T Troduced Watting	no mao	Roa Garr	a Graino.		or Problematic Hydric Soils ³ :		
Histosol (Dark Surface ((S7)				ck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	ipedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (LRR R,	Coast Pr	rairie Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B	•				cky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Thin Dark Surf					e Below Surface (S8) (LRR K, L)		
	Layers (A5)		High Chroma S					k Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)		nganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12) oodic (A17)		Loamy Gleyed Depleted Matri	-	F2)			ıt Floodplain Soils (F19) (MLRA 149B) ent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		Redox Dark Su		-6)			allow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark					xplain in Remarks)		
	leyed Matrix (S4)		Redox Depres	sions (F	8)			,		
X Sandy Re	edox (S5)		Marl (F10) (LR	R K, L)			³ Indicators of hydrophytic vegetation an			
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (ML F	RA 145)	wetland hydrology must be present,			
							unless	disturbed or problematic.		
	ayer (if observed):									
Type: _										
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No		
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P54					
Investigator(s): Kaitlin Rogers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W					
<u>-</u>	relief (concave, convex, none): Concave Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.676593	Long: -86.978899 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 1					
Remarks: (Explain alternative procedures here or in a separate report.)						
This point is in Goldenrod and Alder dominated wetland on the northside o	of the Calumet Trail.					
'						
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) X Oxidized Rhizospheres						
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction ir						
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No X Depth (inches):						
Water Table Present? Yes X No Depth (inches):						
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? YesX No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre						
Describe Recorded Data (stream gauge, monitoring well, aenai priotos, pre	evious inspections), ii available.					
Remarks:						

VEGETATION – Use scientific names of plants.

Tara Chartura (Diataina) 20	Absolute	Dominant	Indicator	Daminana Tast wallshoot
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Fraxinus pennsylvanica	15	Yes	FACW	Number of Dominant Species
2. Alnus glutinosa	25	Yes	<u>FACW</u>	That Are OBL, FACW, or FAC: 8 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 8 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC:100.0% (A/B)
7				Prevalence Index worksheet:
	40	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species55 x 1 =55
1. Cornus racemosa	7	Yes	FAC	FACW species 88 x 2 = 176
2. Cornus sericea	15	Yes	FACW	FAC species 22 x 3 = 66
3				FACU species 7 x 4 = 28
4				UPL species0 x 5 =0
5				Column Totals: 172 (A) 325 (B)
6.				Prevalence Index = B/A = 1.89
7.				Hydrophytic Vegetation Indicators:
	22	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		•		X 2 - Dominance Test is >50%
1. Phalaris arundinacea	7	No	FACW	X 3 - Prevalence Index is ≤3.0 ¹
Thelypteris palustris	3	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting
Solidago caesia		No No	FACU	data in Remarks or on a separate sheet)
Symplocarpus foetidus	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
	5	No	OBL	1 .
				¹ Indicators of hydric soil and wetland hydrology must
6. Eutrochium maculatum	5	No No	OBL	be present, unless disturbed or problematic.
7. Onoclea sensibilis	20	Yes	FACW	Definitions of Vegetation Strata:
8. Lythrum salicaria	15	Yes	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Leersia oryzoides	20	Yes	OBL	diameter at breast height (DBH), regardless of height.
10. Phragmites australis	3	No	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	95	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1. Vitis riparia	15	Yes	FAC	height.
2				Livedrambretia
3				Hydrophytic Vegetation
4				Present?
	15	=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)	-		

Sampling Point: P54

Depth	ription: (Describe to Matrix	the de		ument t l ox Featur		ator or c	onfirm the absence o	if indicator	's.)	
(inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture		Remarks	3
0-6	10YR 3/1	100					Mucky Loam/Clay			
6-14	10YR 3/1	80	10YR 4/6		<u>C</u>	M	Loamy/Clayey	Promin	ent redox cor	ncentrations
								-		
			-			—				
¹Type: C=Co	oncentration, D=Deple	tion, RN	/=Reduced Matrix, I	MS=Mas	ked San	d Grains.	² Location: F	L=Pore Lin	ning, M=Matri	ix.
Hydric Soil I									natic Hydric	
Histosol			Dark Surface ((00)				LRR K, L, ML	
	oipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,			x (A16) (LRR	
Black His	n Sulfide (A4)		MLRA 149E Thin Dark Surf	-	(I DD D	MIDA		-	urface (S8) (I	LRR K, L, R)
	Layers (A5)		High Chroma						(S9) (LRR K ,	•
	Below Dark Surface	(A11)	X Loamy Mucky	-						(LRR K, L, R)
	rk Surface (A12)	(,,,,	Loamy Gleyed			, _ ,		-		(LITTITY, 2, 17) (MLRA 149B)
	oodic (A17)		Depleted Matr		,					side MLRA 145)
	A 144A, 145, 149B)		X Redox Dark S		- 6)				Surface (F22	
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (E	Explain in Re	emarks)	
Sandy G	leyed Matrix (S4)		Redox Depres	sions (F	8)					
Sandy R	edox (S5)		Marl (F10) (LF	Marl (F10) (LRR K, L)				ors of hydro	phytic vegeta	ation and
Stripped	Matrix (S6)		Red Parent Ma	Red Parent Material (F21) (MLRA 145)			wetland hydrology must be present,			
Postrictivo I	_ayer (if observed):						unles	s disturbed	or problemat	iic.
Type:	Layer (II Observed).									
Depth (ir	nches):						Hydric Soil Prese	nt?	Yes X	No
Remarks:							1			

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P55				
Investigator(s): Kaitlin Rodgers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): Concave Slope %: 5				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.676521	Long: -86.978866 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly distur					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.				
Lludraphytia Variation Present?	le the Semulad Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No_X_				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.) This point is within the exisiting gravel of the Calumet Trail.					
This point is within the existing graver of the Galamet Trail.					
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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) — Aquatic Faulia (B13) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Water Marks (B1) Water Marks (B1) Hydrogen Sulfide Odor (
	· / · · · · · · · · · · · · · · · · · ·				
l 	- · · · · -				
l 					
Algal Mat or Crust (B4) — Recent Iron Reduction in This Music Surface (C7)	• • • • • • • • • • • • • • • • • • • •				
Iron Deposits (B5) — Thin Muck Surface (C7) — Other (Explain in Remark)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No X Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:				
Remarks:					
ivenialis.					

VEGETATION – Use scientific names of plants. Sampling Point: P55 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 1 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover OBL species Sapling/Shrub Stratum (Plot size: 20 FACW species 5 x 2 = 1. 10 2. FAC species 0 x 3 = x 4 = 3. FACU species 18 4. UPL species x 5 = 5. Column Totals: 30 (A) 89 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Poa pratensis **FACU** 3 - Prevalence Index is ≤3.0¹ 3 No **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Plantago major data in Remarks or on a separate sheet) 5 __ 3. Melilotus officinalis No **FACU** 4. Epilobium ciliatum 5 No **FACW** Problematic Hydrophytic Vegetation¹ (Explain) 7 Yes 5. Juncus acuminatus OBL ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 30 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Feature				_	
(inches)	Color (moist)	<u> </u>	r (moist)		Type ¹	Loc ²	Texture	Rema	arks
0-10								grave	el/fill
¹ Type: C=Co	ncentration, D=Deple	etion, RM=Reduc	ed Matrix, N	/IS=Mask	ked Sand	Grains.	² Location: PL	.=Pore Lining, M=M	atrix.
Hydric Soil I	ndicators:						Indicators for	r Problematic Hyd	ric Soils³:
Histosol ((A1)		rk Surface (-			2 cm Muc	k (A10) (LRR K, L,	MLRA 149B)
Histic Epi	pedon (A2)	Pol	lyvalue Belo	w Surfac	e (S8) (I	RR R,	Coast Pra	airie Redox (A16) (L	.RR K, L, R)
Black His			MLRA 149B	,				cky Peat or Peat (S3	
	Sulfide (A4)		n Dark Surf		-			Below Surface (S8	
	Layers (A5)		jh Chroma S	-				Surface (S9) (LRR	•
	Below Dark Surface		amy Mucky			R K, L)		ganese Masses (F1	
	rk Surface (A12)		amy Gleyed	-	- 2)			Floodplain Soils (F	
	odic (A17)		pleted Matri					nt Material (F21) (o	
	A 144A, 145, 149B)		dox Dark Sι		•			llow Dark Surface (I	=22)
	ucky Mineral (S1)		pleted Dark		-		Other (Ex	plain in Remarks)	
	eyed Matrix (S4)		dox Depress	-	3)		3		
Sandy Re			rl (F10) (LR					s of hydrophytic veg	
Stripped	Matrix (S6)	Re	d Parent Ma	iterial (F2	21) (MLR	(A 145)		hydrology must be	
Bootriotivo I	over (if absorved).						uniess (disturbed or probler	natic.
Type:	ayer (if observed):								
-			-						N V
Depth (in	cnes):		_				Hydric Soil Present	t? Yes	No <u>X</u>
Remarks:									
Gravel fill due	to being on trail								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/17/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P56
Investigator(s): Kaitlin Rogers, Lydia Loyd, and Steven McDaniel	Section, Township, Range: SE 1/4 NW 1/4 S10 T37N R5W
	relief (concave, convex, none): Concave Slope %: 1
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.676442	Long: -86.978845 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	ppling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 2
Remarks: (Explain alternative procedures here or in a separate report.)	
This point is in a wetland on the south side of the exisiting Calumet Trail or	n the east side of Broadway Avenue.
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)Water-Stained Leaves (I	
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres of	• • • • • • • • • • • • • • • • • • • •
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	
Water Table Present? Yes X No Depth (inches):	
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
Tomano.	

VEGETATION – Use scientific names of plants. Sampling Point: P56 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 78 x 2 = 1. 156 2. FAC species 5 x 3 = 15 30 3. FACU species x 4 = 120 4. UPL species x 5 = Column Totals: 158 (A) 336 6. Prevalence Index = B/A = 2.13 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 2 - Dominance Test is >50% Phalaris arundinacea **FACW** X 3 - Prevalence Index is ≤3.0¹ 30 **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Solidago canadensis Yes data in Remarks or on a separate sheet) 3. 5 No FAC Calystegia sepium 4. Lythrum salicaria 20 OBL Problematic Hydrophytic Vegetation¹ (Explain) No 15 **FACW** 5. Fraxinus pennsylvanica No ¹Indicators of hydric soil and wetland hydrology must 6. 10 **FACW** be present, unless disturbed or problematic. Thelypteris palustris No 7 OBL 7. Symplocarpus foetidus No **Definitions of Vegetation Strata:** 8. Scirpus cyperinus 7 No OBL Tree – Woody plants 3 in. (7.6 cm) or more in 9 Osmunda spectabilis 5 OBL diameter at breast height (DBH), regardless of height. No Lindera benzoin 3 No **FACW** Sapling/shrub - Woody plants less than 3 in. DBH Stachys palustris 1 OBL and greater than or equal to 3.28 ft (1 m) tall. No 12. Carex lurida 5 Nο OBL Herb - All herbaceous (non-woody) plants, regardless 158 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc Depth	ription: (Describe to Matrix	o the de		ument th		ator or c	onfirm the absence o	of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	10YR 3/1	100					Mucky Loam/Clay		
2-8	10YR 3/1	85	10YR 4/6	15		M	Loamy/Clayey	Prominent redox concentrations	
8-16	10YR 4/1	70	10YR 4/6	30	С	M	Loamy/Clayey	Prominent redox concentrations	
¹Type: C=Co	oncentration, D=Deple	etion RN		MS=Mas	ked Sand	d Grains	² I ocation: F		
Hydric Soil I		, , , , , , , , , , , , , , , , , , ,				. 0.0		or Problematic Hydric Soils ³ :	
Histosol ((A1)		Dark Surface ((S7)				uck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Below Surface (S8) (LRR R ,				Coast Prairie Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B	,				ucky Peat or Peat (S3) (LRR K, L, R)	
	Sulfide (A4)		Thin Dark Surf					le Below Surface (S8) (LRR K, L)	
Stratified Layers (A5)X Depleted Below Dark Surface (A11)			High Chroma Sands (S11) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L)				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)		
Thick Dark Surface (A11)			Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (MLRA 149B)		
Mesic Spodic (A17)			X Depleted Matri	-	,		Red Parent Material (F21) (outside MLRA 145)		
(MLRA 144A, 145, 149B)			X Redox Dark St	urface (F	6)		Very Shallow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark				Other (E	Explain in Remarks)	
	leyed Matrix (S4)		Redox Depres	-	8)		³ Indicators of hydrophytic vegetation and		
	edox (S5) Matrix (S6)		Marl (F10) (LR	•	21) (MI F	2Δ 1Δ5)	wetland hydrology must be present,		
Othpped	Watrix (OO)		Red Parent Material (F21) (MLRA 145)			(A 1 40)	unless disturbed or problematic.		
Restrictive L	ayer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil Prese	nt? Yes <u>X</u> No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P57				
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): Concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.674353	Long: -86.986496 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrology naturally problems					
SUMMARY OF FINDINGS – Attach site map showing sam					
· · · · ·					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	within a Wetland? Yes X No				
	If yes, optional Wetland Site ID: Wetland 1				
Remarks: (Explain alternative procedures here or in a separate report.) This point is in spciebush and reed canary dominiated wetland north of Be	verly Shores train station. This is all part of the large Wetland 1 complex				
that includes wet prairie and hydromesophytic swamp forest.	verify offices train station. This is all part of the large wettand 1 complex				
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres	- · · · · · · · · · · · · · · · · · · ·				
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)				
X Algal Mat or Crust (B4) Recent Iron Reduction in	in Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	ks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes X No Depth (inches):	4				
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
Remarks.					

VEGETATION – Use scientific names of plants. Sampling Point: P57 Absolute Dominant Indicator I

Tree Otestano (Districts and O	Absolute	Dominant	Indicator	Barriago Tartagologo de
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer saccharinum	20	Yes	FACW	Number of Dominant Species
2				That Are OBL, FACW, or FAC:4 (A)
3		·		Total Number of Dominant
4				Species Across All Strata: 4 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC:100.0% (A/B)
7				Prevalence Index worksheet:
	20	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 30 x 1 = 30
1. Lindera benzoin	30	Yes	FACW	FACW species 162 x 2 = 324
2. Viburnum opulus	15	Yes	FACW	FAC species 7 x 3 = 21
3. Fraxinus pennsylvanica	7	No	FACW	FACU species 0 x 4 = 0
4.				UPL species 0 x 5 = 0
5.				Column Totals: 199 (A) 375 (B)
6.				Prevalence Index = B/A = 1.88
7.				Hydrophytic Vegetation Indicators:
	 52	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		,		X 2 - Dominance Test is >50%
1. Phalaris arundinacea	90	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Myosotis laxa	20	No	OBL	4 - Morphological Adaptations ¹ (Provide supporting
3. Ranunculus sceleratus	10	No No	OBL	data in Remarks or on a separate sheet)
Equisetum arvense	7	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
			TAC	<u> </u>
5.				¹ Indicators of hydric soil and wetland hydrology must
6.				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	127	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2.				
3.				Hydrophytic Vegetation
4.				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet)	10101 00101		
Tremains. (include prioto numbers here of on a separ	ate sneet.)			

Profile Descripe	ription: (Describe t Matrix	o the dep		ument th x Feature		ator or co	onfirm the absence o	f indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	10YR 2/1	93	10YR 4/6	7	С	М	Muck	Prominent redox concentrations		
6-13	10YR 3/1	80	10YR 2/1	8	D_	M	Mucky Sand			
			10YR 5/6	12	C	M		Prominent redox concentrations		
13-18	10YR 4/1	70	10YR 3/1	8	D	<u>M</u>	Sandy			
			10YR 5/2	_12_	D	_ M_				
			10YR 5/8	10	С			Prominent redox concentrations		
		—								
1Typo: C=Co	noontration D-Donle				Lod Son		2l agation: D	PL=Pore Lining, M=Matrix.		
Hydric Soil I	ncentration, D=Deple	BUOTI, KIVI	-Reduced Matrix, iv	15-IVIASI	keu San	J Grains.		or Problematic Hydric Soils ³ :		
Histosol (Dark Surface (\$	S7)				uck (A10) (LRR K, L, MLRA 149B)		
	ipedon (A2)	•	Polyvalue Belo	•	ce (S8) (LRR R,		rairie Redox (A16) (LRR K, L, R)		
Black His	. ,		MLRA 149B)		, , ,		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
Hydroger	Sulfide (A4)		Thin Dark Surfa	ace (S9)	(LRR R	, MLRA 1	149B) Polyvalu	ie Below Surface (S8) (LRR K, L)		
Stratified	Layers (A5)	•	High Chroma S	High Chroma Sands (S11) (LRR K, L)			Thin Dark Surface (S9) (LRR K, L)			
Depleted	Below Dark Surface	(A11)	Loamy Mucky N	my Mucky Mineral (F1) (LRR K, L)			Iron-Manganese Masses (F12) (LRR K, L, R)			
Thick Da	rk Surface (A12)		Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (MLRA 149B)			
Mesic Spodic (A17)			Depleted Matrix	x (F3)			Red Parent Material (F21) (outside MLRA 145)			
(MLRA	A 144A, 145, 149B)	,	Redox Dark Su	ırface (F	⁻ 6)		Very Shallow Dark Surface (F22)			
	ucky Mineral (S1)		Depleted Dark		, ,		Other (E	Explain in Remarks)		
	eyed Matrix (S4)		Redox Depress		8)		3			
X Sandy Re			Marl (F10) (LR l			 .	³ Indicators of hydrophytic vegetation and			
Stripped	Matrix (S6)	•	Red Parent Ma	iterial (F	21) (ML I	RA 145)	wetland hydrology must be present, unless disturbed or problematic.			
Restrictive L	ayer (if observed):						dilloss	raiotarsou or prosiomano.		
Type:										
Depth (in	ches):						Hydric Soil Prese	nt? Yes <u>X</u> No		
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P58				
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W				
·	relief (concave, convex, none): None Slope %: 3				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.674305	Long: -86.986581 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None				
· · · · · · · · · · · · · · · · · · ·					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly distur	<u></u>				
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.				
Lludraphutic Vagatation Procent? Vag No Y	Is the Sampled Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	within a Wetland? Yes No_X_				
Wetland Hydrology Present?	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
This point is in a road prism adjecent to Wetland 1. North of Beverly Shore	es train station.				
, , ,					
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) Water-Stained Leaves (<u> </u>				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor					
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Ir					
Algal Mat or Crust (B4) Recent Iron Reduction in					
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	mrks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:	_				
Surface Water Present? Yes No X Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:				
, , , , , , , , , , , , , , , , , , ,	' '				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P58 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 1 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 FACW species 0 x 2 = 1. 0 2. FAC species 70 x 3 = 210 108 3. FACU species x 4 = 432 4. UPL species x 5 = Column Totals: 187 (A) 687 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Tragopogon dubius UPL 3 - Prevalence Index is ≤3.0¹ 50 Yes FAC 4 - Morphological Adaptations¹ (Provide supporting 2 Equisetum arvense data in Remarks or on a separate sheet) 20 __ _ 3. Toxicodendron radicans No FAC 4. Parthenocissus quinquefolia 15 No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) 90 Yes **FACU** 5. Poa pratensis ¹Indicators of hydric soil and wetland hydrology must 6. 2 UPL be present, unless disturbed or problematic. Trifolium reflexum No Taraxacum officinale **FACU Definitions of Vegetation Strata:** 7. No 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 187 =Total Cover of size, and woody plants less than 3.28 ft tall. 20) Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desci Depth	ription: (Describe to Matrix	the de		iment th k Feature		ator or co	onfirm the absence o	indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 4/2	40	10YR 6/4	35	С	М	Sandy	Distinct redox concentration	ıs
			10YR 5/8	10					
			10YR 6/2	10					
			10YR 3/1	55					
	ncentration, D=Deple	tion, RM	=Reduced Matrix, M	1S=Masl	ked Sand	d Grains.		_=Pore Lining, M=Matrix.	
Hydric Soil II Histosol (Dark Surface (S7)				or Problematic Hydric Soils ³ : ck (A10) (LRR K, L, MLRA 149E	2 /
	pedon (A2)		Polyvalue Belo	-	na (SR) (I DD D		airie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B		Je (30) (LIXIX IX,		cky Peat or Peat (S3) (LRR K, L	
	Sulfide (A4)		Thin Dark Surfa		(LRR R	. MLRA 1		e Below Surface (S8) (LRR K, L)	
	Layers (A5)		— High Chroma S		-			k Surface (S9) (LRR K, L)	,
	Below Dark Surface	(A11)	Loamy Mucky I					ganese Masses (F12) (LRR K, L	_, R)
Thick Dar	k Surface (A12)	. ,	Loamy Gleyed					t Floodplain Soils (F19) (MLRA	
Mesic Sp	odic (A17)		Depleted Matrix	x (F3)			Red Pare	ent Material (F21) (outside MLR	A 145)
(MLRA	144A, 145, 149B)		Redox Dark Su	ırface (F	6)		Very Sha	llow Dark Surface (F22)	
	ıcky Mineral (S1)		Depleted Dark				Other (E	rplain in Remarks)	
	eyed Matrix (S4)		Redox Depress	•	3)		2		
Sandy Re			Marl (F10) (LR					rs of hydrophytic vegetation and	
Stripped	Matrix (S6)		Red Parent Ma	terial (F	21) (MLF	RA 145)		d hydrology must be present, disturbed or problematic.	
	ayer (if observed):							•	
Type: _									
Depth (in	ches):						Hydric Soil Preser	t? Yes No _>	<u> </u>
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P59				
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): concave Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672979	Long: -86.987008 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None				
· - ·					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.				
Lludraphutic Vagatation Procent? Vag Y No	Is the Sampled Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No Yes X No	If yes, optional Wetland Site ID: Wetland 4				
Remarks: (Explain alternative procedures here or in a separate report.)					
This Point is in a depressional area north of the calumet trail. West of the	Beverly Shores train station.				
'					
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)Water-Stained Leaves ((B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Ir					
Algal Mat or Crust (B4) Recent Iron Reduction in	n in Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):	:				
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	revious inspections), if available:				
, , , , , , , , , , , , , , , , , , ,	, ,				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P59 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 1 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species FACW species 33 x 2 = 1. 66 12 2. FAC species x 3 = 1 x 4 = 3. FACU species 4. UPL species x 5 = Column Totals: 128 (A) 188 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Lythrum salicaria OBL X 3 - Prevalence Index is ≤3.0¹ 20 **FACW** 4 - Morphological Adaptations¹ (Provide supporting 2 Phalaris arundinacea No data in Remarks or on a separate sheet) 10 ___ 3. Scirpus atrocinctus No OBL 4. Juncus tenuis 7 FAC Problematic Hydrophytic Vegetation¹ (Explain) No Euthamia graminifolia 5 No **FAC** 5. ¹Indicators of hydric soil and wetland hydrology must 6. 10 **FACW** be present, unless disturbed or problematic. Eupatorium perfoliatum No 2 No OBL **Definitions of Vegetation Strata:** 7. Ranunculus sceleratus 8. Chamaecrista fasciculata 1 No **FACU** Tree - Woody plants 3 in. (7.6 cm) or more in 9. Onoclea sensibilis 3 **FACW** diameter at breast height (DBH), regardless of height. No 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 128 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: 20) Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/2	95	10YR 5/8	5	<u>C</u>	M	Mucky Sand	Prominent redox concentrations	
6-9	N 2.5/	100					Sandy		
9-12	10YR 5/2	84	10YR 6/2	9	<u>D</u>	M	Sandy		
			10YR 5/6		<u> </u>	M		Prominent redox concentrations	
12-21	10YR 3/1		10YR 4/1	15	<u>D</u>	M	Sandy		
			10YR 5/6	8	<u> </u>	M		Prominent redox concentrations	
21-30	10YR 6/2	88	10YR 6/1	4	<u>D</u>	<u>M</u>	Sandy		
	-			8	<u> </u>	<u>M</u>			
							·		
1 _{Tymax} C=Cc		-tion DN	4-Dadwaad Matrix N				21 postion: D	N-Da Lining M-Matriy	
	oncentration, D=Deple	etion, Riv	I=Reduced Matrix, IV	15=IVIasi	ked Sand	i Grains.		PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :	
Hydric Soil I			Dark Surface (97)				or Problematic Hydric Soils : uck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Belo	,	ce (S8) (I RR R.		rairie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B)		00 (00) (.			ucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa	,	(LRR R	. MLRA 1		ue Below Surface (S8) (LRR K, L)	
	Layers (A5)		High Chroma S	, ,				rk Surface (S9) (LRR K, L)	
	l Below Dark Surface	(A11)	Loamy Mucky N				Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)	•	Loamy Gleyed					nt Floodplain Soils (F19) (MLRA 149B)	
Mesic Sp	oodic (A17)		Depleted Matrix	x (F3)			Red Par	rent Material (F21) (outside MLRA 145)	
(MLR/	A 144A, 145, 149B)		Redox Dark Su	ırface (F	6)		Very Sha	allow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark				Other (E	Explain in Remarks)	
	leyed Matrix (S4)		Redox Depress		8)		2		
X Sandy Re			Marl (F10) (LR l				³ Indicators of hydrophytic vegetation and		
Stripped	Matrix (S6)		Red Parent Ma	iterial (F	21) (MLF	RA 145)	wetland hydrology must be present, unless disturbed or problematic.		
	_ayer (if observed):							·	
Type: _									
Depth (in	iches):						Hydric Soil Preser	nt? Yes X No	
Remarks: At 6 to 9 inch	nes, charcoal/ ash wa	as found.							
	,								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P60				
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): None Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672933	Long: -86.986982 Datum: NAD83				
, <u> </u>	NWI classification: None				
Soil Map Unit Name: Mn - Maumee loamy sand					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrologynaturally problem	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_				
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
This point is on the exisiting Calumet Trail.					
HADBOLOGA					
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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13) And Borrowth (B45)	Moss Trim Lines (B16)				
Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor	· · · · · · · · · · · · · · · · · · ·				
	s on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Ir					
Algal Mat or Crust (B4)Recent Iron Reduction i	• • • • • • • • • • • • • • • • • • • •				
Iron Deposits (B5) Thin Muck Surface (C7)	_ : : : :				
Inundation Visible on Aerial Imagery (B7)Other (Explain in Rema					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No X Depth (inches)					
Water Table Present? Yes No X Depth (inches)					
Saturation Present? Yes No X Depth (inches)	: Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:				
Remarks:					
Normana.					

VEGETATION – Use scientific names of plants. Sampling Point: P60 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 1. FACW species 0 x 2 = 0 2. FAC species 0 x 3 = 30 x 4 = 3. FACU species 120 4. UPL species x 5 = 5. Column Totals: 30 (A) 120 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Plantago lanceolata 3 - Prevalence Index is ≤3.0¹ 2. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. **Definitions of Vegetation Strata:** 7. 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 30 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: 20 Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc Depth	ription: (Describe to Matrix	the dep		ument th x Featur		tor or co	onfirm the absence o	findica	tors.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remar	ks
0-20									gravel/	fill
0-20									graven	1111
¹ Type: C=Co	oncentration, D=Deple	tion, RM=	Reduced Matrix, N	/IS=Masl	ked Sand	d Grains.	² Location: P	L=Pore	Lining, M=Ma	trix.
Hydric Soil I							Indicators fo	r Probl	ematic Hydri	c Soils ³ :
Histosol	(A1)	_	Dark Surface (S7)			2 cm Mu	ck (A10)) (LRR K, L, N	MLRA 149B)
Histic Ep	pipedon (A2)	_	Polyvalue Belo	w Surfac	ce (S8) (LRR R,	Coast Pr	airie Re	dox (A16) (LF	RR K, L, R)
Black His	stic (A3)		MLRA 149B)			5 cm Mu	cky Pea	t or Peat (S3)	(LRR K, L, R)
Hydroge	n Sulfide (A4)	_	Thin Dark Surf	ace (S9)	(LRR R	, MLRA 1	I 49B) Polyvalu	e Below	Surface (S8)	(LRR K, L)
Stratified	I Layers (A5)	-	High Chroma S	Sands (S	311) (LR F	R K, L)	Thin Dar	k Surfac	e (S9) (LRR I	K, L)
	l Below Dark Surface (A11) _	Loamy Mucky	Mineral ((F1) (LR I	R K, L)	Iron-Man	ganese	Masses (F12) (LRR K, L, R)
	rk Surface (A12)	_	Loamy Gleyed		F2)				-	9) (MLRA 149B)
	oodic (A17)	-	Depleted Matri							tside MLRA 145
	A 144A, 145, 149B)	-	Redox Dark Su						rk Surface (F2	22)
	lucky Mineral (S1)	-	Depleted Dark				Other (E	xplain in	Remarks)	
	leyed Matrix (S4)	-	Redox Depress	•	8)		3, ,, ,			
	edox (S5)	-	Marl (F10) (LR		(24) (84) F	24.45\		-	drophytic vege	
Stripped	Matrix (S6)	-	Red Parent Ma	iteriai (F.	21) (WLF	KA 145)		•	logy must be ped or problem	
Postrictivo I	_ayer (if observed):						unless	uistuibe	eu or problem	auc.
Type:	Layer (ii observed).									
-	I X						Hardela Oall Barrer	40	V	N
Depth (ir	ncnes):						Hydric Soil Preser	it ?	Yes	NoX
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Investigator(s): Kaitlin Rogers and Evan Troutman Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W Landform (hillside, terrace, etc.): Outwash Local relief (concave, convex, none): concave Slope %: 3 Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672933 Long: -86.986982 Datum: NAD83 Soil Map Unit Name: Mn - Maumee loamy sand Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation Soil or Hydrology Instructly 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 X No Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes X No If yes, optional Wetland Site ID: Wetland 3 Remarks: (Explain alternative procedures here or in a separate report.) This point in wetland on the south side of the Calumet Trail, west of Beverly Shores train station.	Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Are vegetation	Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P61					
Landform (hillside, terrace, etc.): Outwash Local relief (concave, convex, none): concave Slope %: 3 Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672933 Long: -86.986982 John Long: -86.986982 Joh	Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672933 Long: -86.986982 Datum: NAD83 Soll May Unit Name: Mn - Maumee loamy sand	·						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No (If no, explain in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Wetland Hydrology Indicators: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water Albie (A2) Aquatic Fauna (B13) Moss Tim Lines (B16) Drainage Patiens (B10) Drainage Patiens		,					
Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? YesX No							
Are Vegetation, Soil, or Hydrology significantly disturbed?							
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?	, ,						
Summary OF FinDings - Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes X No within a Wotland? Yes X No Hydric Soil Present? Yes X No If yes, optional Wetland Site ID: Wetland 3 Remarks: (Explain alternative procedures here or in a separate report.) This point in wetland on the south side of the Calumet Trail, west of Beverly Shores train station. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Mart Deposits (B15) Sediment Deposits (B2) Adjal Mat or Crust (B4) Algal Mat or Crust (B4) Research Tensel (B4) Algal Mat or Crust (B4) Fine Algal Mat or Crust (B4) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water (Part (A1) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches): Wetland Area within a Wetland? Water Marks (B1) Secondary Indicators (minimum of two required) Wetland 3 Secondary Indicators (minimum of two required) Field Observations: Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No No Depth (inches): Wetland Hydrology Present? Yes No No Separation Previous inspections), if available:	Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
Hydric Soil Present? Yes X No If yes, optional Wetland? Yes X No If yes, optional Wetland? If yes, optional Wetland Site ID: Wetland 3 Remarks: (Explain alternative procedures here or in a separate report.) This point in wetland on the south side of the Calumet Trail, west of Beverly Shores train station. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Aquatic Fauna (B13) Aguatic Fauna (B13) Aguatic Fauna (B15) Saturation (A3) Aguatic Fauna (B15) Aguatic Fauna (B15) Aguatic Fauna (B16) Aguatic Fauna (B17) Aguatic Fauna (B18) Aguatic	SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.					
Hydric Soil Present? Yes X No If yes, optional Wetland? Yes X No If yes, optional Wetland? If yes, optional Wetland Site ID: Wetland 3 Remarks: (Explain alternative procedures here or in a separate report.) This point in wetland on the south side of the Calumet Trail, west of Beverly Shores train station. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Aquatic Fauna (B13) Aguatic Fauna (B13) Aguatic Fauna (B15) Saturation (A3) Aguatic Fauna (B15) Aguatic Fauna (B15) Aguatic Fauna (B16) Aguatic Fauna (B17) Aguatic Fauna (B18) Aguatic	Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) High Water Table (A2) Water Marks (B1) Agail Mar or Crust (B4) Algal Mat or Crust (B5) Algal Mat or Crust (B6) Algal Mat or Crust (B7) Algal Mat or Crust (B8) Field Observations: Surface Water (Present? Yes No X Depth (inches): Surface Water May (Inches): Surface Water May (Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Algal Mat or Crust (B4) Algal Mat or Crust (B5) Algal Mat or Crust (B6) Algal Mat or Crust (B7) Algal Mat or Crust (B8) Algal Mat or Crust							
HYDROLOGY Wetland Hydrology Indicators:	Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 3					
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) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B3) Youidzed Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Satur							
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): But Aquitard (D3) Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOGY						
Surface Water (A1)	Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
High Water Table (A2) Saturation (A3) Aquatic Fauna (B13) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D1) Microtopographic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Saturation (A3)	<u> </u>						
Water Marks (B1)	<u> </u>						
Sediment Deposits (B2)	_						
Drift Deposits (B3)							
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		• • • • • • • • • • • • • • • • • • • •					
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<u> </u>						
Field Observations: Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		X FAC-Neutral Test (D5)					
Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	· · · · · · · · · · · · · · · · · ·						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		Wetland Hydrology Present? Yes X NO					
		ovious inspections) if available:					
Remarks:	Describe Recorded Data (Stream gauge, monitoring well, aerial priotos, pre	evious inspections), ii available.					
Remarks:							
	Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point: P61 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: 105 Sapling/Shrub Stratum (Plot size: 20 OBL species FACW species 50 x 2 = 1. 100 2. FAC species 25 x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = Column Totals: 180 (A) 280 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Typha X glauca OBL X 3 - Prevalence Index is ≤3.0¹ 30 Yes OBL 4 - Morphological Adaptations¹ (Provide supporting 2 Lythrum salicaria data in Remarks or on a separate sheet) 3. Eupatorium serotinum 25 No FAC 4. Salix discolor 20 No **FACW** Problematic Hydrophytic Vegetation¹ (Explain) Yes **FACW** 5. Fraxinus pennsylvanica ¹Indicators of hydric soil and wetland hydrology must 6. Eleocharis obtusa 60 OBL be present, unless disturbed or problematic. Yes 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 180 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No _ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Featur					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 2/2	96	10YR 4/6	4	<u> </u>	M	Mucky Sand	Prominent redox concentrations	
5-12	10YR 2/2	93	10YR 5/6		<u> </u>	M	Sandy	Prominent redox concentrations	
12-18	10YR 6/2	75	10YR 5/2	15	<u>D</u>	<u>M</u>	Sandy		
			10YR 5/8	10	<u> </u>	<u>M</u>		Prominent redox concentrations	
18-24	10YR 5/3	80	10YR 5/2	8	<u>D</u>	M	Sandy		
			10YR 6/8	12	<u> </u>	<u>M</u>		Prominent redox concentrations	
	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	1S=Mas	ked Sand	d Grains.		PL=Pore Lining, M=Matrix.	
Hydric Soil I								or Problematic Hydric Soils ³ :	
— Histosol			Dark Surface (S	-	(20) (uck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Belo		ce (S8) (I	LRR R,		rairie Redox (A16) (LRR K, L, R)	
Black His	` '		MLRA 149B)	•	` /! DD D	*** ***		ucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4) Layers (A5)		Thin Dark Surfa					rk Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L)	
	Layers (A5) Below Dark Surface	(Δ11)	Loamy Mucky N					nganese Masses (F12) (LRR K, L, R)	
	rk Surface (A12)	(Δ11)	Loamy Gleyed			X IX, = /		nt Floodplain Soils (F19) (MLRA 149B)	
	podic (A17)		Depleted Matrix		1 2)			ent Material (F21) (outside MLRA 145)	
	A 144A, 145, 149B)		Redox Dark Su		- 6)			allow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark	,	,			explain in Remarks)	
	leyed Matrix (S4)		Redox Depress					•	
X Sandy Re	edox (S5)		Marl (F10) (LR l	R K, L)			³ Indicators of hydrophytic vegetation and		
Stripped	Matrix (S6)		Red Parent Ma	terial (F	21) (MLF	RA 145)	wetland hydrology must be present, unless disturbed or problematic.		
Restrictive L	ayer (if observed):							·	
Type: _									
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No	
Remarks:	-to toto 4b - 4	. 11							
All gravel fill s	since being on the tra	All.							

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022						
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P62						
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W						
· · · · · · · · · · · · · · · · · · ·	relief (concave, convex, none): concave Slope %: 22						
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.673097	Long: -86.988363 Datum: NAD83						
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: None						
Are climatic / hydrologic conditions on the site typical for this time of year?							
,							
Are Vegetation, Soil, or Hydrologysignificantly disturb							
Are Vegetation, Soil, or Hydrologynaturally problems							
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area						
Hydric Soil Present? Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No No	If yes, optional Wetland Site ID: Wetland 4						
Remarks: (Explain alternative procedures here or in a separate report.) This point is in a reed canary, royal fern and silver maple dominated wetland on the South side of old road bed, west of Beverly Shores train station.							
HYDROLOGY							
	Casandary Indicators (minimum of two required)						
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)						
Surface Water (A1) Water-Stained Leaves (I	_						
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)						
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) X Oxidized Rhizospheres of	· · · · · · · · · · · · · · · · · · ·						
Drift Deposits (B3) Presence of Reduced Iro	- · · · · · - · · · · · · · · · · · · ·						
Algal Mat or Crust (B4) Recent Iron Reduction in							
Iron Deposits (B5) Thin Muck Surface (C7)							
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No _X Depth (inches):	<u> </u>						
Water Table Present? Yes x No Depth (inches):	10						
Saturation Present? Yes x No Depth (inches):	6 Wetland Hydrology Present? Yes X No						
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:						
Remarks:							

VEGETATION – Use scientific names of plants. Sampling Point: P62

Troo Stratum (Plot size: 20	Absolute	Dominant Species?	Indicator	Deminance Test weeksheets
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer saccharinum	80	Yes	FACW	Number of Dominant Species
2.				That Are OBL, FACW, or FAC:7 (A)
3				Total Number of Dominant
4				Species Across All Strata: 7 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
	80	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 40 x 1 = 40
1. Fraxinus pennsylvanica	50	Yes	FACW	FACW species 207 x 2 = 414
2. Lindera benzoin	15	Yes	FACW	FAC species 5 x 3 = 15
3.				FACU species 3 x 4 = 12
4.				UPL species 0 x 5 = 0
5.				Column Totals: 255 (A) 481 (B)
6.				Prevalence Index = B/A = 1.89
7.				Hydrophytic Vegetation Indicators:
	65	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		•		X 2 - Dominance Test is >50%
1. Phalaris arundinacea	20	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Impatiens capensis	30	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting
3. Galium triflorum	3	No No	FACU	data in Remarks or on a separate sheet)
4. Onoclea sensibilis	5	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Geum canadense	5	No No	FAC	
6. Carex striata	10	No No	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Osmunda spectabilis	15	Yes	OBL	Definitions of Vegetation Strata:
8. Fraxinus pennsylvanica	7	No	FACW	
9. Typha X glauca	15	Yes	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				
	110	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)		- Total Gover		
				Woody vines – All woody vines greater than 3.28 ft in height.
				neight.
2.				Hydrophytic
3.		·		Vegetation
4				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Profile Desci Depth	ription: (Describe to Matrix	o the de		iment th x Feature		ator or c	onfirm the absence of	indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/2	90	10YR 4/6	10	C		Muck		
6-14	10YR 2/2	87	10YR 4/6	8	С	М	Mucky Loam/Clay		
			10YR 5/8	5	С	М		Prominent redox concentrations	
14-20	10YR 5/2	65	10YR 5/3	20	D	М	Sandy		
			10YR 5/8	15	С	М		Prominent redox concentrations	
1							2		
	ncentration, D=Deple	<u>∍tion, RM</u>	I=Reduced Matrix, M	IS=Masl	ked San	d Grains.		L=Pore Lining, M=Matrix.	
Hydric Soil In Histosol (Dark Surface (S7)				or Problematic Hydric Soils ³ : ck (A10) (LRR K, L, MLRA 149B)	
	pedon (A2)		Polyvalue Belo	•	ce (S8) (LRR R,		airie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B)		`	·		cky Peat or Peat (S3) (LRR K, L, R)	
Hydrogen	Sulfide (A4)		Thin Dark Surfa	ace (S9)	(LRR R	, MLRA	149B) Polyvalue	e Below Surface (S8) (LRR K, L)	
Stratified	Layers (A5)		High Chroma S	ands (S	311) (LR I	R K, L)	Thin Dark	k Surface (S9) (LRR K, L)	
	Below Dark Surface	(A11)	X Loamy Mucky I			R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)		Loamy Gleyed		F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	odic (A17)		Depleted Matrix		.0)		Red Parent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		X Redox Dark Su					allow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark				Other (Ex	xplain in Remarks)	
Sandy Re	eyed Matrix (S4)		Redox Depress		5)		³ Indicator	rs of hydrophytic vegetation and	
	Matrix (S6)		Marl (F10) (LR		24) /ML I	DA 14E)			
Outpped i	Matrix (50)		Red Parent Material (F21) (MLRA 145)				unless disturbed or problematic.		
	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Presen	t? Yes X No	
Remarks:	since being on the tra	ail							
All graver illi s	since being on the tra								
								l	

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P63
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W
	relief (concave, convex, none): convex Slope %: 2
	·
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.67316	Long:86.988368
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This Point in an abandoned road bed.	
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) Water-Stained Leaves ((B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced Ir	
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) — Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	I
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pri	avious inspections) if available:
Describe Necorded Data (Stream gauge, monitoring well, aerial priotos, pri	evious inspections), ii avaliable.
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P63 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species Ligustrum vulgare **FACW** species 0 x 2 = 1. FACU 0 2. FAC species 5 x 3 = 15 87 3. FACU species x 4 = 348 4. UPL species 15 x 5 = 75 5. Column Totals: 107 (A) 438 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation 25 =Total Cover Herb Stratum (Plot size: 2 - Dominance Test is >50% Ligustrum vulgare **FACU** 3 - Prevalence Index is ≤3.0¹ 15 UPL 4 - Morphological Adaptations¹ (Provide supporting 2 Asclepias syriaca No data in Remarks or on a separate sheet) 5 __ 3. Parthenocissus quinquefolia No **FACU** 4. Toxicodendron radicans 5 No FAC Problematic Hydrophytic Vegetation¹ (Explain) Solidago canadensis 7 5. No **FACU** ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 82 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

		the de				tor or co	confirm the absence of indicators.)
Depth	Matrix			x Featur	es		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Type ¹	Loc ²	Texture Remarks
0-16							Sandy fill, variable color/texture
1 _{Tymes} C=Ces	 ncentration, D=Deple	tion DM			Lod Con	Crains	21 costion: DI -Doro Lining M-Metrix
		ellon, Riv	-Reduced Matrix, N	15-IVIASI	keu Sand	Giairis.	
Hydric Soil Ir			D = 11 0 - 15 (1	07\			Indicators for Problematic Hydric Soils ³ :
— Histosol (·		Dark Surface (-	(0.0) (1		2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pedon (A2)		Polyvalue Belo		ce (S8) (I	LKK K,	
Black His	` '		MLRA 149B	•			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Thin Dark Surfa				
	Layers (A5)		High Chroma S				Thin Dark Surface (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LRI	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)
Thick Dar	k Surface (A12)		Loamy Gleyed	Matrix (F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Sp	odic (A17)		Depleted Matri	x (F3)			Red Parent Material (F21) (outside MLRA 145)
(MLRA	144A, 145, 149B)		Redox Dark Su	ırface (F	6)		Very Shallow Dark Surface (F22)
Sandy Mu	ıcky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Explain in Remarks)
Sandy Gle	eyed Matrix (S4)		Redox Depress	sions (F	8)		
Sandy Re	edox (S5)		Marl (F10) (LR	R K , L)			³ Indicators of hydrophytic vegetation and
Stripped I	Matrix (S6)		Red Parent Ma	iterial (F	21) (MLF	RA 145)	wetland hydrology must be present,
							unless disturbed or problematic.
Restrictive L	ayer (if observed):						
Type:	old road	bed					
Depth (inc	ches):	7					Hydric Soil Present? Yes No _X_
	,						_ <u> </u>
Remarks:	YR 4/2, 10YR 5/4, 1	0VD 6/3	10VP 6/6				
riii, colors. To	1111 4/2, 10111 3/4, 1	0110/5,	10110/0				

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P64					
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W					
	relief (concave, convex, none): concave Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.673279	Long: -86.988429 Datum: NAD83					
· · · · · · · · · · · · · · · · · · ·						
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur						
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 4					
Remarks: (Explain alternative procedures here or in a separate report.)						
This Point is in wetland North of old road bed.						
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) X Oxidized Rhizospheres of the control of						
Drift Deposits (B3) Presence of Reduced Ire	· · · · · · · · · · · · · · · · · · ·					
Algal Mat or Crust (B4)Recent Iron Reduction in						
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar Sparsely Vegetated Concave Surface (B8)	rks) Microtopographic Relief (D4) X FAC-Neutral Test (D5)					
	A l'Ao-Nedital l'est (D3)					
Field Observations: Surface Water Present? Yes No X Depth (inches):						
Water Table Present? Yes X No Depth (inches):						
Saturation Present? Yes X No Depth (inches):						
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point: P64

T. (D. 1. (D. 1.)	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Carpinus caroliniana	25	Yes	<u>FAC</u>	Number of Dominant Species
2. Quercus bicolor	40	Yes	FACW	That Are OBL, FACW, or FAC:7 (A)
3				Total Number of Dominant
4.				Species Across All Strata: 7 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
	65	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 92 x 1 = 92
1. Fraxinus pennsylvanica	40	Yes	FACW	FACW species 112 x 2 = 224
2. Lindera benzoin	10	Yes	FACW	FAC species 85 x 3 = 255
3.		,		FACU species 0 x 4 = 0
4.				UPL species 0 x 5 = 0
5.				Column Totals: 289 (A) 571 (B)
6				Prevalence Index = B/A = 1.98
7				Hydrophytic Vegetation Indicators:
1.	50	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		- Total Gover		X 2 - Dominance Test is >50%
	40	Van	OBL	
Symplocarpus foetidus	40	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹
2. Geum canadense	10	No No	FAC FAC	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
3. Equisetum arvense	45	Yes	<u>FAC</u>	
4. Glyceria striata	50	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Impatiens capensis	15	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
6. Carex intumescens	7	No	FACW	be present, unless disturbed or problematic.
7. Persicaria virginiana	5	No	FAC	Definitions of Vegetation Strata:
8. Persicaria arifolia	2	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in
9		_		diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	174	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)		•		
1.				Woody vines – All woody vines greater than 3.28 ft in height.
				3
2				Hydrophytic
1				Vegetation Present? Yes X No
<u> </u>		-Tatal Cavan		rieseitt: ies X
		_=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Profile Desc Depth	ription: (Describe to Matrix	o the dep		i <mark>ment tl</mark> c Featur		ator or co	onfirm the absence o	f indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	N 2.5/	100	<u> </u>				Muck		
6-12	10YR 2/2	92	10YR 4/6	8			Mucky Sand		
12-20	10YR 5/2	74	10YR 6/3	14	D	М	Sandy		
			7.5YR 5/6	8	С	М		Prominent redox concentrations	
			10YR 4/6	4	С	М		Prominent redox concentrations	
1									
'Type: C=Co	ncentration, D=Deple	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.		L=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :	
Histosol			Dark Surface (\$	S7)				ick (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Belo	-	ce (S8) (LRR R,	Coast Prairie Redox (A16) (LRR K, L, R)		
Black His	stic (A3)		MLRA 149B))			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Thin Dark Surfa					e Below Surface (S8) (LRR K, L)	
	Layers (A5)	(* 4 4)	High Chroma S				Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky I			RK,L)	Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12) oodic (A17)		Loamy Gleyed Depleted Matrix		Γ ∠)		Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		Redox Dark Su		6)			allow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark					xplain in Remarks)	
Sandy G	leyed Matrix (S4)		Redox Depress	ions (F	8)				
X Sandy R	edox (S5)		Marl (F10) (LR l	R K, L)				rs of hydrophytic vegetation and	
Stripped	Matrix (S6)		Red Parent Ma	terial (F	21) (MLF	RA 145)		d hydrology must be present,	
Postrictivo I	_ayer (if observed):						unless	disturbed or problematic.	
Type:	ayer (ii observeu).								
Depth (in	iches):						Hydric Soil Preser	nt? Yes X No	
Remarks:									
fine sand, fill	on the old road bed.								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P65					
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W					
·	relief (concave, convex, none): concave Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672357	Long: -86.99038 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur						
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
This point in Lizard tail dominated wetland, north of old road bed						
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)Water-Stained Leaves (I						
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) X Oxidized Rhizospheres of	- · · · · -					
Drift Deposits (B3) Presence of Reduced Iro	ron (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4)Recent Iron Reduction in	in Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	ks)Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes X No Depth (inches):	8					
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? YesX_ No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
remarks.						

VEGETATION – Use scientific names of plants.

Tree Christians (Diet sine)	Absolute	Dominant	Indicator	Deminance Test weeksheet
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Ulmus americana	35	Yes	FACW	Number of Dominant Species
2. Acer saccharinum	40	Yes	FACW	That Are OBL, FACW, or FAC:8 (A)
 Populus tremuloides 4. 	20	Yes	FAC	Total Number of Dominant Species Across All Strata: 8 (B)
5.				Percent of Dominant Species
6				That Are OBL, FACW, or FAC:100.0% (A/B)
7				Prevalence Index worksheet:
	95	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species165 x 1 =165
1. Lindera benzoin	30	Yes	FACW	FACW species 145 x 2 = 290
2				FAC species45 x 3 =135
3				FACU species0 x 4 =0
4				UPL species0 x 5 =0
5				Column Totals: 355 (A) 590 (B)
6.				Prevalence Index = B/A =1.66
7				Hydrophytic Vegetation Indicators:
	30	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%
1. Saururus cernuus	50	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹
2. Impatiens capensis	40	Yes	FACW	4 - Morphological Adaptations (Provide supporting
3. Symplocarpus foetidus	35	No	OBL	data in Remarks or on a separate sheet)
4. Geum canadense	15	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Carex crinita	40	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must
6. Carex lupuliformis	40	Yes	OBL	be present, unless disturbed or problematic.
7. Equisetum arvense	10	No	FAC	Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	230	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic Vegetation
4.				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)	•		1

Sampling Point: P65

Profile Desc	ription: (Describe to	o the de	pth needed to docu	ıment t	he indica	tor or c	onfirm the absence of	indicators.)		
Depth	Matrix		Redox	κ Featur	es					
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remai	ks	
0-6	10YR 2/2	95	10YR 4/6	5	<u>C</u>	_M_	Muck			
6-14	10YR 2/2	90	10YR 4/6	10	<u> </u>	M	Mucky Loam/Clay			
14-20	10YR 5/2	95	10YR 6/2	12	<u>D</u>	M	Sandy			
			10YR 5/8	13	<u> </u>	M		Prominent redox of	concentrations	
-										
	oncentration, D=Deple	etion, RN	M=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.		_=Pore Lining, M=Ma		
Hydric Soil			5 1 6 6 "	\			Indicators for Problematic Hydric Soils ³ :			
— Histosol			Dark Surface (-	(0.0)		2 cm Muck (A10) (LRR K, L, MLRA 149B)			
	pipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,	Coast Prairie Redox (A16) (LRR K, L, R)			
Black His	` '		MLRA 149B				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)		Thin Dark Surfa							
	Layers (A5)		High Chroma S	-			Thin Dark Surface (S9) (LRR K, L)			
	Below Dark Surface	(A11)	X Loamy Mucky I			R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)			
	rk Surface (A12)		Loamy Gleyed		F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Mesic S	oodic (A17)		Depleted Matrix					ent Material (F21) (o u		
(MLR	A 144A, 145, 149B)		X Redox Dark Su	rface (F	6)		Very Sha	llow Dark Surface (F	22)	
Sandy M	lucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Ex	plain in Remarks)		
Sandy G	leyed Matrix (S4)		Redox Depress	ions (F	8)					
Sandy R	edox (S5)		Marl (F10) (LR	R K , L)			³ Indicators of hydrophytic vegetation and			
Stripped	Matrix (S6)		Red Parent Ma	terial (F	21) (MLF	RA 145)		d hydrology must be disturbed or problem		
Restrictive !	_ayer (if observed):						unicss	distarbed of problem	auc.	
Type:										
Depth (ir	nches):						Hydric Soil Presen	t? Yes X	No	
Remarks:										
fine sand, fill	on the old road bed.									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P66				
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): convex Slope %: 1				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.672357	Long: -86.990316 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificantly distur					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.				
Lludraphytia Vagatatian Present?	le the Semulad Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes No X	Is the Sampled Area within a Wetland? Yes No_X_				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
Point is in an old east/west road bed to the west of Broadway Avenue.					
1 onk io in all outs 1.551.544 254 15 11.51 11.51 11.51 11.51					
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) Water-Stained Leaves (<u> </u>				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Ir					
Algal Mat or Crust (B4) Recent Iron Reduction in					
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:				
, , , , , , , , , , , , , , , , , , , ,	ρ				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P66 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 75.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 52 x 2 = 1. Lindera benzoin **FACW** 104 2. FAC species 30 x 3 = 15 3. FACU species x 4 = 4. UPL species x 5 = 5. Column Totals: 97 (A) 254 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 20 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Onoclea sensibilis 15 **FACW** 3 - Prevalence Index is ≤3.0¹ 7 No **FACW** 4 - Morphological Adaptations¹ (Provide supporting 2 Impatiens capensis data in Remarks or on a separate sheet) 10 ___ 3. Fraxinus pennsylvanica No **FACW** 4. Solidago canadensis 15 Yes **FACU** Problematic Hydrophytic Vegetation¹ (Explain) 20 Yes 5. Agrimonia parviflora FAC ¹Indicators of hydric soil and wetland hydrology must 6. 10 FAC be present, unless disturbed or problematic. Geum canadense No 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 77 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc Depth	ription: (Describe to Matrix	the depth r		ument the x Feature		itor or co	onfirm the absence of	findicators	s.)	
(inches)	Color (moist)	% C	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	S
0-15			,						gravel/f	
0-13									gravei/i	
		— —								
		— —								
		— —								
¹ Type: C=Co	ncentration, D=Deple	tion, RM=Re	duced Matrix, I	MS=Masl	ked Sand	Grains.	² Location: Pl	L=Pore Lini	ng, M=Mat	rix.
Hydric Soil I			•				Indicators fo			
Histosol	(A1)		Dark Surface	(S7)			2 cm Mu	ck (A10) (L	RR K, L, M	LRA 149B)
Histic Ep	ipedon (A2)		Polyvalue Beld	ow Surfac	ce (S8) (I	LRR R,	Coast Pr	airie Redox	(A16) (LR	R K, L, R)
Black His	stic (A3)		MLRA 149E	3)			5 cm Mu	cky Peat or	Peat (S3)	(LRR K, L, R)
Hydroger	n Sulfide (A4)		Thin Dark Sur	face (S9)	(LRR R	, MLRA 1	l 49B) Polyvalue	e Below Su	rface (S8) (LRR K, L)
Stratified	Layers (A5)		High Chroma	Sands (S	11) (LRF	R K, L)	Thin Dar	k Surface (S9) (LRR K	Χ , L)
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral ((F1) (LRI	R K, L)	Iron-Man	ganese Ma	sses (F12)	(LRR K, L, R)
Thick Da	rk Surface (A12)	_	Loamy Gleyed	l Matrix (I	- 2)		Piedmon	t Floodplair	n Soils (F19) (MLRA 149B)
Mesic Sp	odic (A17)		Depleted Matr	ix (F3)						side MLRA 145)
	A 144A, 145, 149B)		Redox Dark S						Surface (F2	2)
	ucky Mineral (S1)	_	Depleted Dark		` '		Other (Ex	xplain in Re	emarks)	
	eyed Matrix (S4)		Redox Depres	•	3)		3			
	edox (S5)	_	Marl (F10) (LF						ohytic vege	
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)			must be p	
De etel etlere I							uniess	disturbed o	or problema	itic.
	ayer (if observed):									
Type: _										
Depth (in	ches):						Hydric Soil Preser	nt?	Yes	No X
Remarks:										
Roadbed Gra	vel fill.									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P67					
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W					
	relief (concave, convex, none): concave Slope %: 1					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.671925	Long: -86.991204 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrologysignificantly distur	bed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.					
Lludraphytia Vagatation Present?	le the Compled Area					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 4					
Remarks: (Explain alternative procedures here or in a separate report.)						
Lizard tail dominiated wetland south of old road bed.						
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) X Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced Inc	Iron (C4) Stunted or Stressed Plants (D1)					
X Algal Mat or Crust (B4) Recent Iron Reduction in	in Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	rks)Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes No _X Depth (inches):						
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
Nonaks.						

VEGETATION – Use scientific names of plants. Sampling Point: P67 Absolute Dominant Indicator Tree Stratum (Plot size: % Cover Species? Status **Dominance Test worksheet:** 75 **FACW** 1. Acer saccharinum Yes Number of Dominant Species 2. Carpinus caroliniana 20 Yes FAC That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 95 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 85 x 2 = 1. 170 2. FAC species 20 x 3 = 0 3. FACU species x 4 = 4. UPL species x 5 = Column Totals: 185 (A) 310 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ Fraxinus pennsylvanica 2. Yes OBL 4 - Morphological Adaptations¹ (Provide supporting Saururus cernuus data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 90 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

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Profile Desc Depth	ription: (Describe to Matrix	the de		ument th x Feature		ator or c	onfirm the absence o	f indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 2/1	97	10YR 4/6	3	С	M	Mucky Loam/Clay		
8-18	10YR 5/3	60	10YR 5/2	20	D	M	Sandy		
			10YR 6/3	_10_	D_	M			
			10YR 6/8	_10_	C	M		Prominent redox concentrations	
¹Type: C=Co	ncentration, D=Deple	 etion, RM	/=Reduced Matrix, N	 //S=Mas	ked Sand	d Grains.	² Location: P	L=Pore Lining, M=Matrix.	
Hydric Soil I								or Problematic Hydric Soils ³ :	
Histosol ((A1)		Dark Surface (S7)				uck (A10) (LRR K, L, MLRA 149B)	
Histic Ep	ipedon (A2)		Polyvalue Belov	w Surfac	ce (S8) (LRR R,	Coast Prairie Redox (A16) (LRR K, L, R)		
Black His	stic (A3)		MLRA 149B))			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroger	n Sulfide (A4)		Thin Dark Surface (S9) (LRR R, MLRA 1				149B) Polyvalue Below Surface (S8) (LRR K, L)		
Stratified	Layers (A5)		High Chroma Sands (S11) (LRR K, L)				Thin Dark Surface (S9) (LRR K, L)		
Depleted	Below Dark Surface	(A11)	X Loamy Mucky Mineral (F1) (LRR K, L)				Iron-Manganese Masses (F12) (LRR K, L, R)		
Thick Da	rk Surface (A12)		Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (MLRA 149B)		
	odic (A17)		Depleted Matrix				Red Parent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		X Redox Dark Su				Very Shallow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark				Other (E	xplain in Remarks)	
	leyed Matrix (S4)		Redox Depress	•	3)		3, ,, ,		
	edox (S5)		Marl (F10) (LRI		04) (84) 5	DA 445\		ors of hydrophytic vegetation and	
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 145)				wetland hydrology must be present, unless disturbed or problematic.		
	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Prese	nt? Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P68				
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W				
	relief (concave, convex, none): none Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.669724	Long: -86.99584 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1A				
· - ·					
Are climatic / hydrologic conditions on the site typical for this time of year?					
Are Vegetation, Soil, or Hydrology significantly disturbed.					
Are Vegetation, Soil, or Hydrologynaturally problem	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.				
Lindra hidia Variation Procent?	In the Complet Area				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X Yes No X	Is the Sampled Area within a Wetland? Yes No _ X_				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	11 900, optional 11 one 12 1				
Remarks: (Explain alternative procedures here or in a separate report.) This point is in cherry and sassafras dominated upland just east of large e	arndad craak				
This point is in originy and sassanas dominated apiana just east or large of	noded creek.				
HYDROLOGY					
	Secondary Indicators (minimum of two required)				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
	_				
Surface Water (A1) — Water-Stained Leaves (
High Water Table (A2) Saturation (A3) Aquatic Fauna (B13) Marl Deposits (B15)	Moss Trim Lines (B16)				
	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor	<u> </u>				
Sediment Deposits (B2) Oxidized Rhizospheres Presence of Reduced In					
Drift Deposits (B3) Presence of Reduced Ir	<u> </u>				
Algal Mat or Crust (B4)Recent Iron Reduction i					
Iron Deposits (B5) Thin Muck Surface (C7) Other (Figure in Personal (B7))	, ,				
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remai					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No _X Depth (inches):	: Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P68 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 70 **FACU** 1. Quercus rubra Yes Number of Dominant Species 2. Acer saccharinum 15 **FACW** No That Are OBL, FACW, or FAC: 3. **Total Number of Dominant** 4. Species Across All Strata: 4 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: 85 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species Hamamelis virginiana **FACW** species 15 x 2 = Yes **FACU** 30 2. Fagus grandifolia **FACU** FAC species 7 x 3 = 21 3. FACU species 182 x 4 = 728 4. UPL species x 5 = 5. Column Totals: 204 779 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 80 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Sassafras albidum **FACU** 3 - Prevalence Index is ≤3.01 Smilax rotundifolia No FAC 4 - Morphological Adaptations¹ (Provide supporting 2 data in Remarks or on a separate sheet) 3. Vitis aestivalis FACU 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 39 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			κ Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	10YR 4/2	100					Sandy		
10-14	10YR 5/4	76	10YR 6/3	18	<u>D</u>	M	Sandy		
			10YR 6/6	6	<u>C</u>	M		Distinct redox concentrations	
14-24	10YR 6/3	86	10YR 6/3	6	D	M			
			10YR 6/6	8	C	M		Distinct redox concentrations	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						ore Lining, M=Matrix.			
Hydric Soil Indicators:			D 1 0 6 (OT)				Indicators for Problematic Hydric Soils ³ :		
Histosol (A1)			Dark Surface (S7)					A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		Polyvalue Below Surface (S8) (LRR R,				Coast Prairie Redox (A16) (LRR K, L, R)		
Black His	รแต (A3) า Sulfide (A4)		MLRA 149B) This Dark Surface (SQ) (LBB B. MLBA 1				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	Layers (A5)		Thin Dark Surface (S9) (LRR R, MLRA 1 High Chroma Sands (S11) (LRR K, L)				149B) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(Δ11)	Loamy Mucky Mineral (F1) (LRR K, L)						
	rk Surface (A12)	(Δ11)					Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)		
	odic (A17)		Loamy Gleyed Matrix (F2) Depleted Matrix (F3)					Material (F21) (outside MLRA 145)	
	A 144A, 145, 149B)		Redox Dark Surface (F6)					Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark Surface (F6)					in in Remarks)	
	leyed Matrix (S4)		Redox Depressions (F8)						
	edox (S5)		Marl (F10) (LRR K, L)				³ Indicators of hydrophytic vegetation and		
	Matrix (S6)		Red Parent Material (F21) (MLRA 145)				wetland hydrology must be present,		
ompped Matrix (GG)							•	turbed or problematic.	
	ayer (if observed):								
Type:	ahaa);						Hydric Soil Present?	Voc. No. V	
Depth (in Remarks:							nyuric 30ii Present?	Yes No _X	
Remarks.									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

City/County: Chesterton/ Porter County Sampling Date: 6/22/2022							
State: IN Sampling Point: P69							
Section, Township, Range: SW 1/4 NW 1/4 S10 T37N R5W							
I relief (concave, convex, none): none Slope %: 0							
Long: -86.99584 Datum: NAD83							
NWI classification: PFO1A							
Yes X No (If no, explain in Remarks.)							
urbed? Are "Normal Circumstances" present? Yes X 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.							
Is the Sampled Area							
within a Wetland? Yes X No							
If yes, optional Wetland Site ID: Stream 2							
-							
Secondary Indicators (minimum of two required)							
Surface Soil Cracks (B6)							
(B9) Drainage Patterns (B10)							
Moss Trim Lines (B16)							
Dry-Season Water Table (C2)							
(C1) Crayfish Burrows (C8)							
on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)							
Iron (C4) Stunted or Stressed Plants (D1)							
in Tilled Soils (C6) X Geomorphic Position (D2)							
) Shallow Aquitard (D3)							
rks)Microtopographic Relief (D4)							
FAC-Neutral Test (D5)							
): <u>5</u>							
): 0							
): 1 Wetland Hydrology Present? Yes X No							
							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							
revious inspections), if available:							

solute Dominant Cover Species? =Total Cover	N T S P T P P C F F F F F F F F F F F F F F F F F	tumber of Dominant Spechat Are OBL, FACW, or otal Number of Dominant Spechat Are Secretary of Dominant Spechat Are OBL, FACW, or revalence Index works Total % Cover of: DBL species ACW species AC species	cies FAC: t : cies FAC: heet: Multiply x 1 = x 2 =	
=Total Cover	T T S P T O F F F F F F F F F F F F F F F F F F	hat Are OBL, FACW, or otal Number of Dominan pecies Across All Strata ercent of Dominant Spec hat Are OBL, FACW, or revalence Index works	FAC: tt : cies FAC: heet: Multiply x 1 = x 2 =	(B) (A/B)
=Total Cover	T T S P T P P F F F F F F F F F F F F F F F F	hat Are OBL, FACW, or otal Number of Dominan pecies Across All Strata ercent of Dominant Spec hat Are OBL, FACW, or revalence Index works	FAC: tt : cies FAC: heet: Multiply x 1 = x 2 =	(B) (A/B)
=Total Cover	S P T P O F F F F F F F F F F F F F F F F F F	ercent of Dominant Spechat Are OBL, FACW, or revalence Index works Total % Cover of: BL species ACW species AC species	cies FAC: heet: Multiply x 1 = x 2 =	(A/B)
=Total Cover	S P T P O F F F F F F F F F F F F F F F F F F	ercent of Dominant Spechat Are OBL, FACW, or revalence Index works Total % Cover of: BL species ACW species AC species	cies FAC: heet: Multiply x 1 = x 2 =	(A/B)
=Total Cover	T P O F F F F F F F F F F F F F F F F F F	hat Are OBL, FACW, or revalence Index works Total % Cover of: DBL species ACW species AC species	FAC:	by:
=Total Cover	T P O F F F F F F F F F F F F F F F F F F	hat Are OBL, FACW, or revalence Index works Total % Cover of: DBL species ACW species AC species	FAC:	by:
=Total Cover	- O	Total % Cover of: OBL species ACW species AC species	Multiply x 1 = x 2 =	
	F.	ACW species AC species	x 1 = x 2 =	
	F.	ACW species AC species	x 2 =	
	F.	AC species		
	F.	· · · · · · · · · · · · · · · · · · ·		
	F.			
	1	ACU species	x 4 =	
		PL species	x 5 =	
		olumn Totals:	(A)	(B)
		Prevalence Index :		
		ydrophytic Vegetation	Indicators:	
=Total Cover		1 - Rapid Test for Hyd	drophytic Vegetati	on
		2 - Dominance Test is	s >50%	
		— 3 - Prevalence Index i	is ≤3.0 ¹	
		— 4 - Morphological Ada	ptations ¹ (Provide	supporting
		data in Remarks or	on a separate sh	eet)
		Problematic Hydrophy	∕tic Vegetation¹ (E	xplain)
	1,	ndicators of budric soil o	nd watland hydral	ogy must
		efinitions of Vegetation	n Strata:	
		roo Woody plants 3 in	(7.6 cm) or more	in
		anling/ahruh Waady	planta logo than 2	in DDU
=Total Cover				
		•	vines greater tha	n 3.28 it in
		<u> </u>		
			No X	
				ı.
	ļ			
		=Total Cover	=Total Cover 1 - Rapid Test for Hyd 2 - Dominance Test is 3 - Prevalence Index i 4 - Morphological Ada data in Remarks or Problematic Hydrophy 1 Indicators of hydric soil a be present, unless disturb Definitions of Vegetation Tree – Woody plants 3 in diameter at breast height Sapling/shrub – Woody and greater than or equal Herb – All herbaceous (no of size, and woody plants Woody vines – All woody height. Hydrophytic Vegetation Present? Yes =Total Cover	=Total Cover 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide data in Remarks or on a separate she Problematic Hydrophytic Vegetation¹ (E 1 Indicators of hydric soil and wetland hydrole be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more diameter at breast height (DBH), regardless Sapling/shrub – Woody plants less than 3 and greater than or equal to 3.28 ft (1 m) tal Herb – All herbaceous (non-woody) plants, of size, and woody plants less than 3.28 ft to Woody vines – All woody vines greater than height. Hydrophytic Vegetation Present? Yes No _X =Total Cover

	•	o the de				ator or co	confirm the absence of indicators.)		
Depth	Matrix			x Featur		1 2	T .		
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture Remarks	_	
0-9	10YR 5/2	96	10YR 5/6	4	<u>C</u>	M	Sandy	_	
9-20	10YR 5/1	100					Sandy		
								_	
				—				—	
								_	
								—	
							-	_	
								—	
	ncentration, D=Deple	etion, RM	I=Reduced Matrix, N	/IS=Mas	ked San	d Grains.	· · · · · · · · · · · · · · · · · · ·		
Hydric Soil I			Dark Surface (97)			Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Histosol (A1) Histic Epipedon (A2)			Dark Surface (S7) Polyvalue Below Surface (S8) (LRR R,				Coast Prairie Redox (A16) (LRR K, L, R)		
Black Histic (A3)			MLRA 149B)				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Thin Dark Surface (S9) (LRR R, MLRA			, MLRA 1			
Stratified	Layers (A5)		High Chroma Sands (S11) (LRR K, L)				Thin Dark Surface (S9) (LRR K, L)		
Depleted Below Dark Surface (A11)			Loamy Mucky Mineral (F1) (LRR K, L)				Iron-Manganese Masses (F12) (LRR K, L, R	!)	
	rk Surface (A12)		Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (MLRA 149		
	odic (A17)		Depleted Matrix (F3)				Red Parent Material (F21) (outside MLRA 1	45)	
	A 144A, 145, 149B)		Redox Dark Surface (F6)				Very Shallow Dark Surface (F22)		
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark Surface (F7) Redox Depressions (F8)				Other (Explain in Remarks)		
X Sandy Re			Marl (F10) (LRR K, L)				³ Indicators of hydrophytic vegetation and		
Stripped Matrix (S6)			Red Parent Material (F21) (MLRA 145)				wetland hydrology must be present,		
							unless disturbed or problematic.		
	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present? Yes X No		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P70					
Investigator(s): Kaitlin Rogers and Evan troutman	Section, Township, Range: SE 1/4 SW 1/4 S9 T37N R5W					
<u>-</u>	relief (concave, convex, none): Concave Slope %: 0					
	Long: -87.000247 Datum: NAD83					
Soil Map Unit Name: Mn - Maumee loamy sand,	NWI classification: PFO1A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.					
Lludwards dia Variation Drassed Variation Drassed	In the Complet Area					
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
small fern dominated depression south of the old east/west roadbed to the	west of Wieland Ditch					
of the old destinated depression south of the old destinated to the	West of Wisiana Bron.					
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) X Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres						
Drift Deposits (B3) Presence of Reduced Iro	· · · · · · · · · · · · · · · · · · ·					
Algal Mat or Crust (B4) Recent Iron Reduction ir	. ,					
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes No X Depth (inches):						
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point: P70 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet: FACW** 1. Acer saccharinum Yes Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 75 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 **OBL** species **FACW** species 110 x 2 = **FACW** 220 Lindera benzoin 2. Fraxinus pennsylvanica **FACW** FAC species 0 x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = 5. Column Totals: 150 260 6. Prevalence Index = B/A = 1.73 **Hydrophytic Vegetation Indicators:** 35 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Osmunda spectabilis X 3 - Prevalence Index is ≤3.0¹ 2. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 40 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			Featur						
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks		
8-0	10YR 3/2	95	10YR 4/6	6	<u> </u>	M	Mucky Loam/Clay	Prominent redox concentrations		
8-16	10YR 5/4	85	10YR 5/2	8	<u>D</u>	M	Sandy			
			10YR 6/8		<u>C</u>	M		Prominent redox concentrations		
16-25	10YR 5/3	76	10YR 6/3	9	<u>D</u>	M	Sandy			
			10YR 6/2	5	<u>D</u>	M				
			10YR 5/8	10	<u>C</u>	M		Prominent redox concentrations		
								_		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.										
Hydric Soil II			Dark Surface (S	١٦١				or Problematic Hydric Soils ³ :		
Histosol (ipedon (A2)		Polyvalue Belov	,	co (SS) (I	DD D		ck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B)		JC (UU) (I			cky Peat or Peat (S3) (LRR K, L, R)		
	Sulfide (A4)		Thin Dark Surfa		(LRR R	MLRA		e Below Surface (S8) (LRR K, L)		
	Layers (A5)		— High Chroma S					Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	X Loamy Mucky N				Iron-Manganese Masses (F12) (LRR K, L, R)			
	rk Surface (A12)		Loamy Gleyed I	Matrix (F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Mesic Sp	odic (A17)		Depleted Matrix	(F3)			Red Parent Material (F21) (outside MLRA 145)			
(MLRA	A 144A, 145, 149B)		X Redox Dark Sur	rface (F	6)		Very Shallow Dark Surface (F22)			
	ucky Mineral (S1)		Depleted Dark S				Other (Explain in Remarks)			
	eyed Matrix (S4)		Redox Depress		3)		30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
Sandy Re	` '		Marl (F10) (LRF				³ Indicators of hydrophytic vegetation and			
Stripped	Matrix (S6)		Red Parent Mat	erial (F	21) (MLF	RA 145)	wetland hydrology must be present, unless disturbed or problematic.			
	ayer (if observed):							·		
Type: _										
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No		
Remarks:										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P71					
Investigator(s): Kaitlin Rogers and Evan troutman	Section, Township, Range: SE 1/4 SW 1/4 S9 T37N R5W					
	relief (concave, convex, none): Concave Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.667873	Long: <u>-87.000977</u> Datum: <u>NAD83</u>					
Soil Map Unit Name: Mn - Maumee loamy sand,	NWI classification: PFO1C					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrologysignificantly distur	rbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sam						
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland 7					
	ii yos, optional vectario otto ib.					
Remarks: (Explain alternative procedures here or in a separate report.) This point in a sparsely vegetated depressional wetland south of an old roa	ad hed					
This point in a sparsory vegetated depressional wettand south of an old roc	ad bod.					
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) X_ Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizospheres						
Drift Deposits (B3) Presence of Reduced Iron	on (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface (C7)						
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar						
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes No X Depth (inches):						
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point: P71 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet: FACW** 1. Acer saccharinum Yes Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 4 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 90 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species 10 **FACW** species 108 x 2 = 1. Lindera benzoin **FACW** 216 2. FAC species 0 x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = 5. Column Totals: 108 (A) 216 6. Prevalence Index = B/A = 2.00 **Hydrophytic Vegetation Indicators:** 10 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Lindera benzoin X 3 - Prevalence Index is ≤3.0¹ Yes **FACW** 4 - Morphological Adaptations¹ (Provide supporting 2 Fraxinus pennsylvanica data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Featur					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/2	100					Mucky Loam/Clay		
8-15	10YR 3/1	60	10YR 5/1	_20_	D	M	Mucky Sand		
			10YR 4/6	15	<u>C</u>	M		Prominent redox concentration	ns
15-20	10YR 6/3	88	10YR 6/2	4	<u>D</u>	<u>M</u>			
			10YR 6/8	8	C	M		Prominent redox concentration	าร
1Type: C=Co	ncentration, D=Deple						² l ocation: Pl	_=Pore Lining, M=Matrix.	
Hydric Soil I		elion, Kiv	-Reduced Matrix, N	13-IVIAS	keu Sand	diallis.		or Problematic Hydric Soils ³ :	
Histosol (Dark Surface (S7)				ck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		Polyvalue Belo	,	ce (S8) (LRR R.		airie Redox (A16) (LRR K, L, R)	,
Black His			MLRA 149B		() (,		cky Peat or Peat (S3) (LRR K, L ,	R)
	n Sulfide (A4)		Thin Dark Surfa	,	(LRR R	, MLRA		e Below Surface (S8) (LRR K, L)	,
	Layers (A5)		— High Chroma S				Thin Dark Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	X Loamy Mucky				Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)	,	Loamy Gleyed			. ,		t Floodplain Soils (F19) (MLRA 1	
	odic (A17)		Depleted Matri		,			ent Material (F21) (outside MLRA	
	A 144A, 145, 149B)		Redox Dark Su		6)			illow Dark Surface (F22)	,
	ucky Mineral (S1)		Depleted Dark	-	-			rplain in Remarks)	
	leyed Matrix (S4)		Redox Depress					,	
	edox (S5)		Marl (F10) (LR		,		³ Indicator	rs of hydrophytic vegetation and	
	Matrix (S6)		Red Parent Ma		21) (MLF	RA 145)	wetland hydrology must be present,		
				•				disturbed or problematic.	
Restrictive L Type:	.ayer (if observed):								
Depth (in	ches):						Hydric Soil Presen	it? Yes_X_ No	
Remarks:	,						1 -		_

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P72					
Investigator(s): Kaitlin Rogers and Evan troutman	Section, Township, Range: SE 1/4 SW 1/4 S9 T37N R5W					
	relief (concave, convex, none): Convex Slope %: 3					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.667896						
Soil Map Unit Name: Mn - Maumee loamy sand,	NWI classification: PFO1C					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrologysignificantly distur	bed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes No X	within a Wetland? Yes No_X_					
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
In an old road bed.						
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) Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (· / · · · · · · · · · · · · · · · · · ·					
Sediment Deposits (B2) Oxidized Rhizospheres of Deposits (B2)						
Drift Deposits (B3) Presence of Reduced Iro	<u> </u>					
Algal Mat or Crust (B4) Recent Iron Reduction in This Music Surface (C7)	. ,					
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:	<u></u>					
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes No X Depth (inches):						
Saturation Present? Yes No X Depth (inches):						
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						

VEGETATION – Use scientific names of plants. Sampling Point: P72

Trop Stratum (Diet size: 20	Absolute	Dominant Species?	Indicator	Deminance Test weeksheets
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Ulmus americana	25	Yes	FACW	Number of Dominant Species
2.				That Are OBL, FACW, or FAC:4 (A)
3				Total Number of Dominant
4				Species Across All Strata: 5 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 80.0% (A/B)
7				Prevalence Index worksheet:
	25	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)				OBL species 0 x 1 = 0
1.				FACW species 39 x 2 = 78
2.				FAC species 57 x 3 = 171
3.				FACU species 10 x 4 = 40
1				UPL species 0 x 5 = 0
				Column Totals: 106 (A) 289 (B)
6				Prevalence Index = B/A = 2.73
7.				Hydrophytic Vegetation Indicators:
1.		-Tatal Causan		
Harl Objective (Districts 40		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)				X 2 - Dominance Test is >50%
1. Trifolium repens	10	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Fraxinus pennsylvanica	7	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. Toxicodendron radicans	15	Yes	<u>FAC</u>	
4. Geum canadense	5	No	FAC	—— Problematic Hydrophytic Vegetation ¹ (Explain)
5. Persicaria virginiana	5	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
6. Verbena urticifolia	7	No	FAC	be present, unless disturbed or problematic.
7. Agrimonia parviflora	15	Yes	FAC	Definitions of Vegetation Strata:
8. Symphyotrichum lanceolatum	7	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Carex blanda	10	Yes	FAC	diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				
	81	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)		•		
				Woody vines – All woody vines greater than 3.28 ft in height.
				noight.
2				Hydrophytic
				Vegetation Present? Yes X No
4.				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	rate sheet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			k Featur				•		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-2	10YR 3/2	100					Sandy			
2-10	10YR 6/4	100					Sandy			
10-18	10YR 2/2	85	10YR 5/8	6	С	M	Mucky Loam/Clay	Prominent redox concentrations		
			10YR 4/6	9	<u> </u>	M		Prominent redox concentrations		
¹Type: C=Co	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	 1S=Masl	ked Sand	Grains.	² Location: PL=P	ore Lining, M=Matrix.		
Hydric Soil I			, , , , , , , , , , , , , , , , , , , ,					roblematic Hydric Soils ³ :		
Histosol			Dark Surface (S7)				A10) (LRR K, L, MLRA 149B)		
	ipedon (A2)		Polyvalue Belo	,	ce (S8) (LRR R,		e Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B		, , ,	,	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
— Hydroger	n Sulfide (A4)		Thin Dark Surfa		(LRR R	MLRA				
	Layers (A5)		High Chroma S		-		Thin Dark Surface (S9) (LRR K, L)			
	Below Dark Surface	(A11)	Loamy Mucky I				Iron-Manganese Masses (F12) (LRR K, L, R)			
	rk Surface (A12)	()	Loamy Gleyed			, -,	Piedmont Floodplain Soils (F19) (MLRA 149B)			
	odic (A17)		Depleted Matrix		/			Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		Redox Dark Su		6)			v Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark	`	,			in in Remarks)		
	leyed Matrix (S4)		Redox Depress					in in remarke,		
	edox (S5)		Marl (F10) (LR		3)		³ Indicators of hydrophytic vegetation and			
	Matrix (S6)				24) /MI E	OA 14E\	wetland hydrology must be present,			
Stripped	Matrix (30)		Red Parent Ma	iteriai (F	21) (IVILI	KA 145)	unless disturbed or problematic.			
	ayer (if observed):									
Type: _										
Depth (in	ches):						Hydric Soil Present?	Yes No _X_		
Remarks:	the upper 10inches.	Ah was	observed beginning	at 10 ind	ches to a	denth o	f 18 inches			
rodabed iiii iii	Tale apper Tolliones.	7 to Was	obocived beginning	at 10 iii	51100 10 0	doparo	TO MONGO.			

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P73				
Investigator(s): Kaitlin Rogers and Evan troutman	Section, Township, Range: SE 1/4 SW 1/4 S9 T37N R5W				
	relief (concave, convex, none): Concave Slope %: 2				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.667935	Long: -87.001061 Datum: NAD83				
Soil Map Unit Name: Mn - Maumee loamy sand,	NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly disturb					
	· — —				
Are Vegetation, Soil, or Hydrology naturally problems					
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important leatures, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 5				
Remarks: (Explain alternative procedures here or in a separate report.)					
North of roadbed from P72					
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) Water-Stained Leaves (F	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (Crayfish Burrows (C8)				
Sediment Deposits (B2) X Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro	Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)Recent Iron Reduction in	in Tilled Soils (C6) X Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remark	rks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes No _X Depth (inches):					
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
Tomano.					

VEGETATION – Use scientific names of plants.

VEGETATION – Use scientific names of pla	nts.			Sampling Point: P73
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Fraxinus pennsylvanica	50	Yes	FACW	Number of Deminent Species
2. Acer saccharinum	40	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3.				Total Number of Dominant
4				Species Across All Strata: 7 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
Sanling/Shruh Stratum (Diet eize: 20)	90	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)				OBL species 7 x 1 = 7
1. Lindera benzoin	70	Yes	FACW	FACW species 215 x 2 = 430
2. Fraxinus pennsylvanica	30	Yes	FACW	FAC species 10 x 3 = 30
3.				FACU species 12 x 4 = 48
4				UPL species0 x 5 =0
5.				Column Totals: 244 (A) 515 (B)
6				Prevalence Index = B/A = 2.11
7				Hydrophytic Vegetation Indicators:
	100	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)				X 2 - Dominance Test is >50%
1. Fraxinus pennsylvanica	15	Yes	FACW	X 3 - Prevalence Index is ≤3.0¹
2. Impatiens capensis	10	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. Galium aparine	7	No No	FACU	
4. Parthenocissus quinquefolia	5	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
 Persicaria virginiana Glyceria striata 	<u>10</u> 7	Yes No	FAC OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.			OBL	Definitions of Vegetation Strata:
8.				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	54	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hydrophytic
3				Vegetation
4				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separate or	rate sheet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			Featur						
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 2/2	93	10YR 4/6		<u>C</u>	M	Mucky Loam/Clay	Prominent redox concentrations		
8-14	10YR 2/2	60	10YR 3/1	15	<u>D</u>	<u>M</u>	Loamy/Clayey			
			10YR 5/8		<u> </u>	M		Prominent redox concentrations		
			10YR 4/6	18	<u>D</u>	M				
14-20	10YR 6/3		10YR 6/1	10	<u>D</u>	<u>M</u>	Sandy			
			10YR 6/1	12	C	M		Distinct redox concentrations		
¹Type: C=Co	oncentration, D=Deple	etion, RN	 ∕/=Reduced Matrix, M	S=Mas	ked Sand	Grains.	² Location: P	L=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators:							or Problematic Hydric Soils ³ :		
Histosol ((A1)		Dark Surface (S	37)			2 cm Mu	ick (A10) (LRR K, L, MLRA 149B)		
Histic Ep	ipedon (A2)		Polyvalue Belov	w Surfa	ce (S8) (I	LRR R,	Coast Pr	rairie Redox (A16) (LRR K, L, R)		
Black His	` '		MLRA 149B)					icky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Thin Dark Surfa					e Below Surface (S8) (LRR K, L)		
	Layers (A5)		High Chroma S				Thin Dark Surface (S9) (LRR K, L)			
	Below Dark Surface	(A11)	X Loamy Mucky N			R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)			
	rk Surface (A12)		Loamy Gleyed I		F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
	oodic (A17)		Depleted Matrix		.0)			ent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		X Redox Dark Sur				Very Shallow Dark Surface (F22)			
	ucky Mineral (S1)		Depleted Dark S				Other (Explain in Remarks)			
	leyed Matrix (S4) edox (S5)		Redox Depress		5)		³ Indicators of hydrophytic vegetation and			
	` '		Marl (F10) (LRF		24) /MI E	0	wetland hydrology must be present,			
Stripped	Matrix (S6)		Red Parent Mat	teriai (i	21) (WILI	(A 145)	unless disturbed or problematic.			
	.ayer (if observed):									
Type: _	-la-a-Na						Uhadaia Gail Bassasa	-40 V V N-		
Depth (in	cnes):						Hydric Soil Preser	nt? Yes X No		
Remarks: fill roadbed.										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway Trail	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P74
Investigator(s): Kaitlin Rogers and Evan troutman	Section, Township, Range: SE 1/4 SW 1/4 S9 T37N R5W
	relief (concave, convex, none): Concave Slope %: 2
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.666437	Long: -87.004627 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 7
Remarks: (Explain alternative procedures here or in a separate report.) Point is in a mucky wetland dominated by lizard tail south of the old roadbo	ed just as it turns south.
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) Water-Stained Leaves (
X High Water Table (A2) Aquatic Fauna (B13)	X Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
X Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced In	ron (C4) Stunted or Stressed Plants (D1)
X Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	rks)Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	: <u></u> -
Water Table Present? Yes X No Depth (inches):	<u>2</u>
Saturation Present? Yes X No Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Remarks:	
remains.	

VEGETATION – Use scientific names of plants. Sampling Point: P74 Absolute Dominant Indicator Tree Stratum (Plot size: % Cover Species? Status **Dominance Test worksheet:** 75 **FACW** 1. Fraxinus pennsylvanica Yes Number of Dominant Species 25 2. Quercus bicolor Yes **FACW** That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 100 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 100 x 2 = 1. 200 2. FAC species 0 x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = Column Totals: 160 (A) 260 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Saururus cernuus X 3 - Prevalence Index is ≤3.0¹ 2. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 60 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X

=Total Cover

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

Profile Desc Depth	ription: (Describe to Matrix	the dep		iment th k Featur		ator or c	confirm the absence of	f indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-10	N 2.5/	97	10YR 4/6	3	С	M	Muck	Prominent redox concentrations		
10-17	10YR 2/1	92	10YR 4/6	8	C	M	Mucky Loam/Clay	Prominent redox concentrations		
17-25	10YR 6/2	84	10YR 5/2	15	D_	M	Sandy			
			10YR 5/8	12	C	M		Prominent redox concentrations		
			10YR 4/6	5	C	M		Prominent redox concentrations		
17	- D D - I		Deduced Metric M				21	L. David Links at M. Matein		
Hydric Soil I	ncentration, D=Deple	etion, Rivi	=Reduced Matrix, M	i5=Masi	ked Sand	d Grains.		L=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :		
Histosol			Dark Surface (S	S7)				ck (A10) (LRR K, L, MLRA 149B)		
X Histic Ep			Polyvalue Belov	•	ce (S8) (LRR R,		rairie Redox (A16) (LRR K, L, R)		
Black His			MLRA 149B)		` , `			cky Peat or Peat (S3) (LRR K, L, R)		
Hydroger	n Sulfide (A4)		Thin Dark Surfa	Thin Dark Surface (S9) (LRR R, MLRA 1				e Below Surface (S8) (LRR K, L)		
Stratified	Layers (A5)		High Chroma S	ands (S	311) (LR I	R K, L)	Thin Dar	k Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Mucky N			R K, L)		ganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)		Loamy Gleyed		F2)			t Floodplain Soils (F19) (MLRA 149B)		
	odic (A17)		Depleted Matrix		.0)			ent Material (F21) (outside MLRA 145)		
	A 144A, 145, 149B)		Redox Dark Su					allow Dark Surface (F22)		
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark : Redox Depress		` '		Other (E.	xplain in Remarks)		
	edox (S5)		Marl (F10) (LRI		3)		³ Indicators of hydrophytic vegetation and			
	Matrix (S6)		Red Parent Ma		21) (MI I	RΔ 145)	wetland hydrology must be present,			
	wattix (66)		TROUT GIOTE WIG	torial (i	21) (III 2 1	140)	unless disturbed or problematic.			
	.ayer (if observed):									
Type: _ Depth (in	ahaa):						Hydric Soil Preser	at2 Van V Na		
Remarks:							nyunc 3011 Freser	nt? Yes X No		
fill roadbed.										

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P75
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
·	ral relief (concave, convex, none): Convex Slope %: 5
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.66647500	Long: -87.0048500 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
· · · · · · · · · · · · · · · · · · ·	
Are climatic / hydrologic conditions on the site typical for this time of year	
Are Vegetation, Soil, or Hydrologysignificantly dis	· — —
Are Vegetation, Soil, or Hydrologynaturally proble	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Road bed just before turns south.	
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) Water-Stained Leaves	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odd	
	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (C	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem	narks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
	s):
Surface Water Present? Yes No Depth (inches Water Table Present? Yes No Depth (inches	s):
Saturation Present? Yes No Depth (inches	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Damarka	
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P75 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 **FACW** species x 2 = 1. 14 2. FAC species 10 x 3 = 3. FACU species 50 x 4 = 200 4. UPL species 20 x 5 = 100 5. Column Totals: 87 (A) 344 6. Prevalence Index = B/A = 3.95 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 2 - Dominance Test is >50% Liriodendron tulipifera 30 **FACU** 3 - Prevalence Index is ≤3.0¹ 15 **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Solidago canadensis No data in Remarks or on a separate sheet) 20 __ _ 3. Amphiachyris dracunculoides Yes UPL 4. Parthenocissus quinquefolia 5 No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) Toxicodendron radicans 10 No **FAC** 5. ¹Indicators of hydric soil and wetland hydrology must 6. 7 **FACW** be present, unless disturbed or problematic. Fraxinus pennsylvanica No 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 87 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

ENG FORM 6116-8, JUL 2018

Depth (inches) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks
0-10 10YR 4/2 85 10YR 3/1 9 D M Sandy gravel/fill 10YR 4/6 6 C M Prominent redox concentrations 10-18 10YR 5/4 75 10YR 5/2 15 D M Sandy
10-18 10YR 5/4 75 10YR 5/2 15 D M Sandy
10-18 10YR 5/4 75 10YR 5/2 15 D M Sandy
10YR 5/8 10 C M Prominent redox concentrations
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) — Polyvalue Below Surface (S8) (LRR R, — Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LRR K, L)
Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)
Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R
Thick Dark Surface (A12) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 149
Mesic Spodic (A17) Depleted Matrix (F3) Red Parent Material (F21) (outside MLRA 1
(MLRA 144A, 145, 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F22)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Other (Explain in Remarks)
Sandy Gleyed Matrix (S4) Redox Depressions (F8)
X Sandy Redox (S5) Marl (F10) (LRR K, L) Indicators of hydrophytic vegetation and
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 145) wetland hydrology must be present,
unless disturbed or problematic.
Restrictive Layer (if observed): Type:
Depth (inches): Hydric Soil Present? Yes X No
Remarks:
2-5% gravel fill in the upper 10inches.

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P76
Investigator(s): Kaitlin Rogers	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
• • • •	relief (concave, convex, none): Concave Slope %: 2
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.66578600	Long: -87.00626400 Datum: NAD83
·	
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.
Lludwark, tie Versteiler Breezent	In the Complet Area
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No Yes X No	If yes, optional Wetland Site ID: Wetland 7
Remarks: (Explain alternative procedures here or in a separate report.)	
Carex and lizard tail dominated wetland.	
ourox and near an adminated wettand.	
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) X_ Water-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	• , , , , , , , , , , , , , , , , , , ,
Iron Deposits (B5) — Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P76 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet: FACW** 1. Acer saccharinum Yes Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 50 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 50 x 2 = 1. 100 2. FAC species 0 x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = Column Totals: 170 (A) 220 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Saururus cernuus X 3 - Prevalence Index is ≤3.0¹ Carex lupulina Yes OBL 4 - Morphological Adaptations¹ (Provide supporting 2 data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 120 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			Featur		1 2	- .	5 .	
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks	
0-9	10YR 2/2	95	10YR 4/6	5	<u>C</u>	<u>M</u>	Mucky Loam/Clay	Prominent redox concentrations	
9-20	10YR 5/2	74	10YR 6/2	8	<u>D</u>	<u>M</u>	Sandy		
			10YR 5/6	6	<u>C</u>	M		Prominent redox concentrations	
			10YR 6/8	12	<u>C</u>	M		Prominent redox concentrations	
	-								
¹ Type: C=Co	ncentration, D=Deple	etion, RM	l=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.		L=Pore Lining, M=Matrix.	
Hydric Soil I			D 1 0 1 10	> =\				or Problematic Hydric Soils ³ :	
— Histosol ((A1) ipedon (A2)		Dark Surface (S	,	co (S8) (I DD D		ck (A10) (LRR K, L, MLRA 149B) airie Redox (A16) (LRR K, L, R)	
Black His			MLRA 149B)		ce (30) (i	LKK K,		cky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa		(LRR R	MLRA		e Below Surface (S8) (LRR K, L)	
	Layers (A5)		High Chroma S					k Surface (S9) (LRR K, L)	
	Below Dark Surface	(A11)	X Loamy Mucky N					iganese Masses (F12) (LRR K, L, R)	
	rk Surface (A12)	(****)	Loamy Gleyed			, _,		t Floodplain Soils (F19) (MLRA 149B)	
	oodic (A17)		Depleted Matrix		,			ent Material (F21) (outside MLRA 145)	
	A 144A, 145, 149B)		X Redox Dark Su		6)			allow Dark Surface (F22)	
	ucky Mineral (S1)		Depleted Dark S		-			xplain in Remarks)	
	leyed Matrix (S4)		Redox Depress				`	,	
	edox (S5)		Marl (F10) (LRF		,		³ Indicato	rs of hydrophytic vegetation and	
	Matrix (S6)		Red Parent Mat		21) (MLF	RA 145)			
					, (disturbed or problematic.	
Restrictive L Type:	.ayer (if observed):								
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P77
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
	relief (concave, convex, none): Convex Slope %: 5
	· · · · · · · · · · · · · · · · · · ·
Subregion (LRR or MLRA): <u>LRR L, MLRA 97</u> Lat: <u>41.66580500</u>	Long: -87.00626200 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This point is on a roadbed, Mertz Avenue.	
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) Water-Stained Leaves ((B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Oxidized Rhizospheres	• · · / <u>—</u>
Drift Deposits (B3) Presence of Reduced Ir	· · · · · · · · · · · · · · · · · · ·
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remai	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	I
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pri	
Describe Necorded Data (Stream gauge, monitoring well, aerial priotos, pri	evious inspections), ii available.
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P77 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 FACW species x 2 = 1. 14 2. FAC species 77 x 3 = 231 3. FACU species 35 x 4 = 140 4. UPL species x 5 = 5. Column Totals: 119 (A) 385 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 2 - Dominance Test is >50% Amphicarpaea bracteata FAC 3 - Prevalence Index is ≤3.01 30 Yes **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 Solidago canadensis data in Remarks or on a separate sheet) 3. Toxicodendron radicans No FAC 4. Parthenocissus quinquefolia 5 No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) 7 5. Ulmus americana **FACW** ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 119 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

		the depth nee				tor or co	onfirm the absence of	indicators.)	
Depth	Matrix			x Feature			_	_	
(inches)	Color (moist)	% Cole	or (moist)	%	Type ¹	Loc ²	Texture	Remar	ks
0-6	10YR 2/2	100					Sandy		
6-18								Gravel	Fill
1- 0.0							21 (1 D)		
	ncentration, D=Deple	tion, RM=Redu	ced Matrix, N	/IS=Mask	ked Sand	Grains.		_=Pore Lining, M=Ma	
Hydric Soil II Histosol (D	ark Surface (97)				r Problematic Hydri ck (A10) (LRR K, L, I	
	pedon (A2)		olyvalue Belo		ا) (82) <u>م</u>	RR R		airie Redox (A16) (LF	
Black His			MLRA 149B)C (CC) (L			cky Peat or Peat (S3)	•
	Sulfide (A4)		in Dark Surf	,	(LRR R.	MLRA 1		Below Surface (S8)	
	Layers (A5)		gh Chroma S				· -	Surface (S9) (LRR	
	Below Dark Surface (amy Mucky					ganese Masses (F12	•
	rk Surface (A12)		amy Gleyed			. ,		: Floodplain Soils (F1	
Mesic Sp	odic (A17)	De	epleted Matri	x (F3)			Red Pare	nt Material (F21) (ou	tside MLRA 145)
(MLRA	A 144A, 145, 149B)	Re	edox Dark Sı	urface (F	6)		Very Sha	llow Dark Surface (F	22)
	ucky Mineral (S1)	De	epleted Dark	Surface	(F7)		Other (Ex	plain in Remarks)	
	eyed Matrix (S4)		edox Depres	-	3)		•		
Sandy Re			arl (F10) (LR					s of hydrophytic vege	
Stripped	Matrix (S6)	R	ed Parent Ma	aterial (F2	21) (MLR	(A 145)		d hydrology must be p	
Postriotivo I	ayer (if observed):						uniess	disturbed or problem	atic.
Type:	ayer (ii observeu).								
Depth (in	chos):		_				Hydric Soil Presen	t? Yes	No. Y
			_				Hydric 30ii Freseii		NoX
Remarks:	avel road bed								
Tills was a gi	averroad bed								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P78
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
·	relief (concave, convex, none): Concave Slope %: 2
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.66582500	Long: -87.00632300 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology significantly distur-	
	· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrologynaturally problems	
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 8
Remarks: (Explain alternative procedures here or in a separate report.)	
Fern dominated wetland north of Mertz Ave.	
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) Water-Stained Leaves ((B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2) X Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Ir	con (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	: <u></u>
Water Table Present? Yes No X Depth (inches):	: <u></u>
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P78 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet: FACW** 1. Acer saccharinum Yes Number of Dominant Species 2. Sassafras albidum FACU No That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 75.0% (A/B) Prevalence Index worksheet: 95 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 90 x 2 = **FACW** 180 Lindera benzoin 2. Sassafras albidum **FACU** FAC species 90 x 3 = 3. FACU species 20 x 4 = 4. UPL species x 5 = 5. Column Totals: 200 (A) 530 6. Prevalence Index = B/A = 2.65 **Hydrophytic Vegetation Indicators:** 15 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10 X 2 - Dominance Test is >50% Parathelypteris noveboracensis X 3 - Prevalence Index is ≤3.0¹ 2. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 90 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desci Depth	ription: (Describe to Matrix	o the de	•	<mark>ument th</mark> x Feature		ator or co	onfirm the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	5YR 4/6	100			<u></u>		Muck	
6-12	10YR 2/2	93	10YR 5/6	7			Mucky Sand	Prominent redox concentrations
12-20	10YR 5/2	78	10YR 6/2	10			Sandy	
			10YR 5/8	12				Prominent redox concentrations
¹ Type: C=Co	ncentration, D=Deple	 etion, RN	1=Reduced Matrix, M	/IS=Mas	ked Sand	d Grains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators fo	or Problematic Hydric Soils ³ :
Histosol ((A1)		Dark Surface (ıck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		Polyvalue Belo		ce (S8) (LRR R,		rairie Redox (A16) (LRR K, L, R)
Black His			MLRA 149B	,				icky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Thin Dark Surfa					e Below Surface (S8) (LRR K, L)
	Layers (A5)		High Chroma S					rk Surface (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)		nganese Masses (F12) (LRR K, L, R)
	rk Surface (A12)		Loamy Gleyed		F2)			nt Floodplain Soils (F19) (MLRA 149B)
	odic (A17)		Depleted Matri		·e)			ent Material (F21) (outside MLRA 145)
	A 144A, 145, 149B)		Redox Dark Su Depleted Dark					allow Dark Surface (F22)
	ucky Mineral (S1) eyed Matrix (S4)		Redox Depress		` '		Other (E.	xplain in Remarks)
X Sandy Re			Marl (F10) (LR	•	5)		³ Indicato	ors of hydrophytic vegetation and
	Matrix (S6)		Red Parent Ma		24) /MI E	DA 14E)		nd hydrology must be present,
Stripped	iviatrix (30)		Red Falelit Ma	ilenai (F	21) (IVILI	(A 145)		s disturbed or problematic.
	ayer (if observed):							·
Type: _								
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P79
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
<u>'</u>	relief (concave, convex, none): Concave Slope %: 5
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.66393600	Long: -87.00940300 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PF01C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
, , ,	
Are Vegetation, Soil, or Hydrologysignificantly disturbed.	<u></u>
Are Vegetation, Soil, or Hydrologynaturally problems	
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 9
Remarks: (Explain alternative procedures here or in a separate report.)	
In Pharag / cattail wetland north of existing Cal Trail, just east of St Park R	Rd.
L HYDROLOGY	
	Or and the state of the state o
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water Stained Leaves (Surface Soil Cracks (B6)
Surface Water (A1) — Water-Stained Leaves (
X High Water Table (A2) Aquatic Fauna (B13) Agr Deposits (B15)	Moss Trim Lines (B16)
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) — Hydrogen Sulfide Odor	<u> </u>
Sediment Deposits (B2) Nrift Deposits (R3) Presence of Reduced In	
Drift Deposits (B3) Presence of Reduced In	<u> </u>
Algal Mat or Crust (B4)Recent Iron Reduction i	
Iron Deposits (B5) — Thin Muck Surface (C7) — Other (Explain in Remainder)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes X No Depth (inches):	
Saturation Present? Yes X No Depth (inches):	:8 Wetland Hydrology Present? Yes _X No
(includes capillary fringe)	* * * * * * * * * * * * * * * * * * *
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P79 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3. **Total Number of Dominant** 4. Species Across All Strata: 2 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 87 x 2 = 1. 174 100 2. FAC species x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = Column Totals: 232 (A) 519 6. Prevalence Index = B/A = 2.24 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ Typha X glauca OBL Phragmites australis 50 Yes **FACW** 4 - Morphological Adaptations¹ (Provide supporting 2 data in Remarks or on a separate sheet) 3. Lythrum salicaria 25 No OBL 4. Eupatorium perfoliatum 7 No **FACW** Problematic Hydrophytic Vegetation¹ (Explain) Euthamia graminifolia 10 No FAC 5. ¹Indicators of hydric soil and wetland hydrology must 6. 15 **FACW** be present, unless disturbed or problematic. Solidago gigantea No 20 FAC **Definitions of Vegetation Strata:** 7. Solanum dulcamara No 8. Carex cristatella 15 No **FACW** Tree - Woody plants 3 in. (7.6 cm) or more in 9. Equisetum arvense 70 Yes FAC diameter at breast height (DBH), regardless of height. 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 11. Herb - All herbaceous (non-woody) plants, regardless 232 =Total Cover of size, and woody plants less than 3.28 ft tall. 20) Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desci Depth	ription: (Describe t Matrix	o the dep		u <mark>ment th</mark> x Featur		ator or c	confirm the absence of	f indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	N 2.5/	94	10YR 4/6	6	С	M	Muck	Prominent redox concentrations	
10-17	10YR 2/1	84	10YR 4/6	10	C	M	Mucky Loam/Clay	Prominent redox concentrations	
			7.5YR 5/8	6	<u>C</u>	<u>M</u>		Prominent redox concentrations	
17-25	10YR 5/2	80	10YR 6/2	9	D	M	Sandy		
			10YR 6/8	11	<u>C</u>	M		Prominent redox concentrations	
¹ Type: C=Co	ncentration, D=Deple	etion, RM:	=Reduced Matrix, M	/IS=Masi	ked San	d Grains.	. ² Location: P	L=Pore Lining, M=Matrix.	
Hydric Soil I								or Problematic Hydric Soils ³ :	
Histosol (Dark Surface (\$,	(00) (ick (A10) (LRR K, L, MLRA 149B)	
X Histic Epi Black His		-	Polyvalue Belo MLRA 149B		ce (58) (LKK K,		rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa	,	(LRR R	. MLRA		e Below Surface (S8) (LRR K, L)	
	Layers (A5)	•	High Chroma S		-			k Surface (S9) (LRR K, L)	
	Below Dark Surface	(A11)	Loamy Mucky I					nganese Masses (F12) (LRR K, L, R)	
X Thick Dar	rk Surface (A12)		Loamy Gleyed	Matrix (F2)	-	Piedmon	nt Floodplain Soils (F19) (MLRA 149B)	
Mesic Sp	odic (A17)		Depleted Matrix	x (F3)			Red Pare	ent Material (F21) (outside MLRA 145)	
(MLRA	A 144A, 145, 149B)	ř	Redox Dark Su	ırface (F	6)		Very Shallow Dark Surface (F22)		
	ucky Mineral (S1)		Depleted Dark Surface (F7)				Other (E	xplain in Remarks)	
	eyed Matrix (S4)		Redox Depress		8)		2		
Sandy Re			Marl (F10) (LR				³ Indicators of hydrophytic vegetation and		
Stripped	Matrix (S6)	Red Parent Material (F21) (MLRA 145)			RA 145)	wetland hydrology must be present, unless disturbed or problematic.			
Restrictive L	ayer (if observed):							'	
Type: _									
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P80
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
• • • •	relief (concave, convex, none): Convex Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.663905	Long: <u>-87.009361</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Yes No _X_	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X
Wetland Hydrology Present? Yes No _X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Calumet trail at St. Park Road crossing	
L HYDROLOGY	
	O consideration to the description of the construction to
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) Water-Stained Leaves (I	
High Water Table (A2) Saturation (A3) Aquatic Fauna (B13) Marl Deposits (B15)	Moss Trim Lines (B16)
Saturation (A3) Water Marks (B1) Marl Deposits (B15) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Sediment Deposits (B2) Sediment Deposits (B2) Oxidized Rhizospheres of	· / · · · · · · · · · · · · · · · · · ·
Drift Deposits (B3) — Oxidized Kilizospheres of Presence of Reduced Inc.	
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	• • • • • • • • • • • • • • • • • • • •
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	<u> </u>
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	Wettaile Hydrology Flescht: 165 NO _X
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
	,
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P80 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 1. FACW species 0 x 2 = 0 2. FAC species 0 x 3 = 0 x 4 = 3. FACU species 4. UPL species 10 x 5 = 5. Column Totals: 10 (A) 50 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Centaurea stoebe 3 - Prevalence Index is ≤3.0¹ 2. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. **Definitions of Vegetation Strata:** 7. 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 10 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descr	iption: (Describe to	the depti	n needed to doc	ument th	ne indica	tor or co	confirm the absence of indicators.)
Depth	Matrix			x Feature	es		
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-15							Gravel Fill
							- <u>-</u>
¹ Type: C=Cor	ncentration, D=Deple	tion, RM=f	Reduced Matrix, N	/IS=Mask	ked Sand	l Grains.	-
Hydric Soil In	idicators:						Indicators for Problematic Hydric Soils ³ :
Histosol (A	A1)	_	Dark Surface (-			2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)	_	Polyvalue Belo	w Surfac	ce (S8) (I	_RR R,	Coast Prairie Redox (A16) (LRR K, L, R)
Black Hist	tic (A3)		MLRA 149B)			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)	_	Thin Dark Surf	ace (S9)	(LRR R,	MLRA 1	149B) Polyvalue Below Surface (S8) (LRR K, L)
Stratified	Layers (A5)	_	High Chroma S	Sands (S	11) (LRF	R K, L)	Thin Dark Surface (S9) (LRR K, L)
Depleted	Below Dark Surface	(A11) _	Loamy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)
Thick Dar	k Surface (A12)	_	Loamy Gleyed	Matrix (F	- 2)		Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spo	odic (A17)	_	Depleted Matri	x (F3)			Red Parent Material (F21) (outside MLRA 145)
(MLRA	144A, 145, 149B)	_	Redox Dark Sι	ırface (F	6)		Very Shallow Dark Surface (F22)
Sandy Mu	ıcky Mineral (S1)	_	Depleted Dark	Surface	(F7)		Other (Explain in Remarks)
	eyed Matrix (S4)	_	Redox Depress	sions (F8	3)		_
Sandy Re	dox (S5)	_	Marl (F10) (LR	RK, L)			³ Indicators of hydrophytic vegetation and
Stripped N	Matrix (S6)	_	Red Parent Ma	aterial (F	21) (MLF	RA 145)	· · · · · · · · · · · · · · · · · · ·
							unless disturbed or problematic.
Restrictive La	ayer (if observed):						
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes No _X
Remarks:	· ·						
Nemaiks.							

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022								
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P81								
Investigator(s): Kaitlin Rogers and Evan Troutman	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W								
<u>'</u>	relief (concave, convex, none): Concave Slope %: 0								
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.663859	Long: -87.009334 Datum: NAD83								
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: none								
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)								
Are Vegetation, Soil, or Hydrologysignificantly distur									
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)								
SUMMARY OF FINDINGS-Attach site map showing sampling point locations, transects, important features, etc.									
Lindrah da Varatatian Dracanta Van V No	Is the Compiled Area								
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	Is the Sampled Area within a Wetland? Yes X No								
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 10								
Remarks: (Explain alternative procedures here or in a separate report.)									
This Point is in a depression south of the Calumet Trail.									
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) Water-Stained Leaves ((B9) Drainage Patterns (B10)								
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)								
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)								
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)								
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)								
Drift Deposits (B3) Presence of Reduced Ir	ron (C4) Stunted or Stressed Plants (D1)								
Algal Mat or Crust (B4) Recent Iron Reduction i	in Tilled Soils (C6) X Geomorphic Position (D2)								
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)								
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remai	rks)Microtopographic Relief (D4)								
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)								
Field Observations:									
Surface Water Present? Yes No X Depth (inches):	: <u></u> _								
Water Table Present? Yes X No Depth (inches):	:10								
Saturation Present? Yes X No Depth (inches):	:6 Wetland Hydrology Present? YesX No								
(includes capillary fringe)									
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:								
Remarks:									

VEGETATION – Use scientific names of plants. Sampling Point: P81 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 1 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 35 x 2 = 1. 70 2. FAC species 20 x 3 = 0 x 4 = 3. FACU species 4. UPL species x 5 = Column Totals: 135 (A) 210 6. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Typha X glauca OBL X 3 - Prevalence Index is ≤3.0¹ 20 No **FACW** 4 - Morphological Adaptations¹ (Provide supporting 2 Onoclea sensibilis data in Remarks or on a separate sheet) 10 __ _ 3. No OBL Mimulus ringens 4. Parathelypteris noveboracensis 15 No FAC Problematic Hydrophytic Vegetation¹ (Explain) Euthamia graminifolia No **FAC** 5. ¹Indicators of hydric soil and wetland hydrology must 6. 15 **FACW** be present, unless disturbed or problematic. Fraxinus pennsylvanica No 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 135 =Total Cover of size, and woody plants less than 3.28 ft tall. 20) Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Descr	iption: (Describe to	the de	pth needed to doc	ument th	ne indica	ator or c	onfirm the absence of inc	dicators.)	
Depth Matrix		Redo	Redox Features						
(inches)	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc ²	Texture	Remarks	
0-6	N 2.5/	100					Muck		
6-18	7.5YR 5/4	100					Mucky Sand		
18-30	10YR 5/2	80	10YR 5/6	12	C	M	Sandy I	Prominent redox concentrations	
			10YR 6/2	8	<u>D</u>	M			
¹ Type: C=Co	 ncentration, D=Deple	tion, RM	======================================	 ∕IS=Masl	ked Sand	d Grains.	² Location: PL=P	ore Lining, M=Matrix.	
Hydric Soil Ir			·					roblematic Hydric Soils ³ :	
Histosol (Dark Surface (S7)				A10) (LRR K, L, MLRA 149B)	
	pedon (A2)		Polyvalue Belo		ce (S8) (I	LRR R,		e Redox (A16) (LRR K, L, R)	
Black Histic (A3) MLRA 149B)				() (,		Peat or Peat (S3) (LRR K, L, R)		
	Sulfide (A4)		Thin Dark Surf	,	(LRR R	. MLRA		elow Surface (S8) (LRR K, L)	
_ · · · · _				ands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)					
	Below Dark Surface	(A11)	Loamy Mucky	-				nese Masses (F12) (LRR K, L, R)	
	k Surface (A12)	(,,,,,	Loamy Gleyed			(oodplain Soils (F19) (MLRA 149B	
	odic (A17)		Depleted Matri		1 2)			Material (F21) (outside MLRA 14	
					·6)				
				dox Dark Surface (F6) pleted Dark Surface (F7)			Very Shallow Dark Surface (F22) Other (Explain in Remarks)		
							Other (Expla	in in Remarks)	
	eyed Matrix (S4)		Redox Depres		5)		31	f books on books on a section and	
Sandy Re			Marl (F10) (LR					f hydrophytic vegetation and	
Stripped Matrix (S6)Rec		Red Parent Ma	d Parent Material (F21) (MLRA 145)			wetland hydrology must be present, unless disturbed or problematic.			
	ayer (if observed):							·	
Type: _									
Depth (inc	ches):						Hydric Soil Present?	Yes <u>X</u> No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P82
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: NW 1/4 NW 1/4 S16 T37N R5W
·	relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.660471	Long: -87.014189 Datum: NAD83
Soil Map Unit Name: Mn - Maumee loamy sand	NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	rrbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problems	natic? (If needed, explain any answers in Remarks.)
	mpling point locations, transects, important features, etc.
Lludranhutia Vagatatian Dracant? Vag No V	In the Compled Aven
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This Point is in a suspect wetland area in a low depression between dunes	s.
,	
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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced Ir	
Algal Mat or Crust (B4)Recent Iron Reduction i	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	· · · · · · · · · · · · · · · · · · ·
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	:
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro-	revious inspections), if available:
, , -	
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P82

T. 0() (D) ()	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Sassafras albidum	85	Yes	FACU	Number of Dominant Species
2. Nyssa sylvatica	15	No	<u>FAC</u>	That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant
4				Species Across All Strata: 5 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 20.0% (A/B)
7				Prevalence Index worksheet:
	100	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
Berberis thunbergii	7	No	FACU	FACW species 7 x 2 = 14
2. Hamamelis virginiana	10	Yes	FACU	FAC species43 x 3 =129
3. Lindera benzoin	7	<u>No</u>	FACW	FACU species138 x 4 =552
4. Quercus alba	10	Yes	FACU	UPL species0 x 5 =0
5. Populus tremuloides	3	No	FAC	Column Totals: 188 (A) 695 (B)
6.				Prevalence Index = B/A = 3.70
7				Hydrophytic Vegetation Indicators:
	37	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
Toxicodendron radicans	25	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
2. Rubus allegheniensis	15	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting
3. Poa pratensis	10	No	FACU	data in Remarks or on a separate sheet)
4. Maianthemum racemosum	1	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	51	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2.				
3				Hydrophytic Vegetation
4.				Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	rate sheet.)	-		
, , ,	,			

Profile Descr	ription: (Describe to	the dep	th needed to docu	ument tl	he indica	tor or co	onfirm the absence of indicat	ors.)	
Depth	Matrix			x Featur	es				
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/2	100					Sandy		
6-18	5YR 3/4	100					Sandy		
18-30	10YR 3/4	100					Sandy		
		—							
			_						
¹ Type: C=Co	ncentration, D=Deple	tion, RM	=Reduced Matrix, N	 //S=Mas	ked Sand	Grains.	² Location: PL=Pore L	ining, M=Matrix.	
Hydric Soil Ir							Indicators for Proble		s³:
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10)	(LRR K, L, MLRA	149B)
Histic Epi	pedon (A2)	•	Polyvalue Belo	w Surfa	ce (S8) (I	LRR R,	Coast Prairie Red	dox (A16) (LRR K ,	L, R)
Black His	tic (A3)	•	MLRA 149B)			5 cm Mucky Peat	or Peat (S3) (LRR	K, L, R)
Hydrogen	Sulfide (A4)		Thin Dark Surf	ace (S9)	(LRR R	MLRA 1	Polyvalue Below	Surface (S8) (LRR	K, L)
	Layers (A5)		High Chroma S		-			e (S9) (LRR K, L)	. ,
	Below Dark Surface	(A11)	Loamy Mucky	-				Masses (F12) (LRF	R K. L. R)
	k Surface (A12)	,	Loamy Gleyed			, ,		lain Soils (F19) (MI	
	odic (A17)		Depleted Matri		/			rial (F21) (outside	
	A 144A, 145, 149B)		— ' Redox Dark Sι		·6)		Very Shallow Dar		-,
	ucky Mineral (S1)		Depleted Dark				Other (Explain in		
	eyed Matrix (S4)	•	Redox Depress				отне (Ехріані ні	rtomanto)	
Sandy Re			Marl (F10) (LR		0)		³ Indicators of hyd	rophytic vegetation	and
	Matrix (S6)		Red Parent Ma		21) /MI E) A 1/E)		ogy must be preser	
Stripped i	watrix (30)		Ned Falent Wa	iteriai (i	21) (WILT	(A 145)	•	ed or problematic.	ιι,
	ayer (if observed):								
Type: _									
Depth (inc	ches):						Hydric Soil Present?	Yes N	o <u>X</u>
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/22/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P83
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W
	relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.659183	Long: -87.018047 Datum: NAD83
Soil Map Unit Name: OaE - Oakville fine sand,	NWI classification: None
	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrologysignificantly distu	
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
This point is in an interdunal depression within the proposed trail route sou	uth of highway 12.
L 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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4) Recent Iron Reduction i	
Iron Deposits (B5) Thin Muck Surface (C7)	· · · · · · · · · · · · · · · · · · ·
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Water Table Present? Yes No X Depth (inches):	<u> </u>
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P83 Absolute Dominant Indicator Tree Stratum (Plot size: % Cover Species? Status **Dominance Test worksheet: FACU** 1. Quercus rubra 10 No Number of Dominant Species 2. Sassafras albidum 90 Yes **FACU** That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 25.0% (A/B) Prevalence Index worksheet: 100 =Total Cover Total % Cover of: Multiply by: OBL species Sapling/Shrub Stratum (Plot size: 20 **FACW** species 0 x 2 = 1. 0 2. FAC species 7 x 3 = 109 3. FACU species x 4 = 436 7 4. UPL species x 5 = Column Totals: 123 492 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Smilax rotundifolia **FAC** 3 - Prevalence Index is ≤3.0¹ Pteridium aquilinum 5 Yes **FACU** 4 - Morphological Adaptations¹ (Provide supporting 2 data in Remarks or on a separate sheet) 3. Vaccinium pallidum Yes UPL 4. Amelanchier arborea 1 **FACU** Problematic Hydrophytic Vegetation¹ (Explain) No 3 5. Maianthemum racemosum **FACU** ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 23 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument t	he indica	tor or co	onfirm the absence of indica	ators.)
Depth	Matrix			x Featur				
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/2	100					Sandy	
4-20	10YR 6/6	100					Sandy	
¹ Type: C=Co	oncentration, D=Deple	etion, RM	1=Reduced Matrix, N	//S=Mas	ked Sand	Grains.	² Location: PL=Pore	Lining, M=Matrix.
Hydric Soil I	ndicators:							elematic Hydric Soils ³ :
Histosol ((A1)		Dark Surface (S7)			2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (I	RR R,	Coast Prairie Ro	edox (A16) (LRR K, L, R)
Black His	stic (A3)		MLRA 149B	,				at or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Thin Dark Surf				149B) Polyvalue Belov	v Surface (S8) (LRR K, L)
	Layers (A5)		High Chroma S	-			Thin Dark Surfa	ce (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Mucky			R K, L)		e Masses (F12) (LRR K, L, R)
	rk Surface (A12)		Loamy Gleyed		(F2)			plain Soils (F19) (MLRA 149B)
	odic (A17)		Depleted Matri					erial (F21) (outside MLRA 145)
	A 144A, 145, 149B)		Redox Dark Su	-	-			ark Surface (F22)
	ucky Mineral (S1)		Depleted Dark				Other (Explain i	n Remarks)
	leyed Matrix (S4) edox (S5)		Redox Depres		8)		3Indicators of by	drophytic vegetation and
	Matrix (S6)		Marl (F10) (LR Red Parent Ma		(21) (M) E	A 14E)		plogy must be present,
Stripped	Matrix (30)		Neu Faleiit Wa	alenai (i	ZI) (WILI	A 145)		ped or problematic.
Restrictive L	ayer (if observed):						diffeed dictark	oca or problematio.
Type:								
Depth (in	iches):						Hydric Soil Present?	Yes No _X_
Remarks:								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P84
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W
•	relief (concave, convex, none): None Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.658622	Long: -87.01997 Datum: NAD83
Soil Map Unit Name: OaE - Oakville fine sand,	NWI classification: None
<u> </u>	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.
Von No V	to the Committed Area
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:
	ii yoo, optional troduita cito ib.
Remarks: (Explain alternative procedures here or in a separate report.) Point is in a witchhazel and sassafras dominated forested depression sout	th of highway 12
Politi is iii a witoiiiiazei aitu sassairas uoriiiitateu toresteu uepression sout	in or nignway 12.
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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	<u> </u>
Drift Deposits (B3) Presence of Reduced In	- · · · · -
Algal Mat or Crust (B4) Recent Iron Reduction in	· · ·
Iron Deposits (B5) Thin Muck Surface (C7)	. , , , ,
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark)	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
, , , , , , , , , , , , , , , , , , , ,	
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P84

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Liriodendron tulipifera	45	Yes	FACU	Number of Dominant Species
2. Sassafras albidum	15	No	FACU	That Are OBL, FACW, or FAC:(A)
3. Quercus rubra	20	No	FACU	Total Number of Dominant
4. Acer saccharinum	45	Yes	FACW	Species Across All Strata: 7 (B)
5.				
0				Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)
7				Prevalence Index worksheet:
<i>1</i>	 125	=Total Cover		
Carolina /Charolina /Charolina / Diataina 20	123	- Total Covel		
Sapling/Shrub Stratum (Plot size: 20)	40	V	E4011	'
1. Sassafras albidum	10	Yes	FACU	FACW species 53 x 2 = 106
2. Hamamelis virginiana	15	Yes	FACU	FAC species15 x 3 =45
3. <u>Lindera benzoin</u>	5	No	FACW	FACU species122 x 4 =488
4				UPL species0 x 5 =0
5				Column Totals: 190 (A) 639 (B)
6				Prevalence Index = B/A = 3.36
7.				Hydrophytic Vegetation Indicators:
	30	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)		,		2 - Dominance Test is >50%
·	15	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
2. Parthenocissus quinquefolia	7	Yes	FACU	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
3. Poa pratensis	10	Yes	FACU	
4. Fraxinus pennsylvanica	3	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				October 1 Manufacture 1 and 1 and 2 in DBH
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				
12.	 35	-Total Cayor		Herb – All herbaceous (non-woody) plants, regardless
W 1 1 1 2 2 1 1 1 1 2 2 2 2 2 2 2 2 2 2		=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hydrophytic
3				Vegetation
4				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Profile Desci	ription: (Describe to	the depth				tor or co	onfirm the absence of indic	ators.)	
Depth	Matrix			x Feature					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remar	ks
0-4	10YR 4/2	100					Sandy		
4-20	10YR 5/6	100					Sandy		
1- 0.0							21 11 12 12		
Hydric Soil I	ncentration, D=Deple	tion, RIVI=R	teduced Matrix, N	vi5=iviasi	ked Sand	Grains.	² Location: PL=Por Indicators for Pro		
Histosol (Dark Surface ((\$7)				0) (LRR K, L, N	
	pedon (A2)	_	Polyvalue Belo		ce (S8) (I	RR R		Redox (A16) (LR	
Black His			MLRA 149B		30 (00) (1			eat or Peat (S3)	· ·
	Sulfide (A4)		Thin Dark Surf	,	(LRR R,	MLRA 1		w Surface (S8)	
	Layers (A5)		– High Chroma S		-			ace (S9) (LRR I	
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Manganes	se Masses (F12)	(LRR K, L, R)
Thick Da	rk Surface (A12)		_ _Loamy Gleyed	Matrix (I	- 2)		Piedmont Floo	dplain Soils (F1	9) (MLRA 149B)
Mesic Sp	odic (A17)		_ Depleted Matri	ix (F3)			Red Parent Ma	iterial (F21) (ou	tside MLRA 145)
(MLRA	A 144A, 145, 149B)		_Redox Dark Su	urface (F	6)		Very Shallow D	ark Surface (F2	22)
	ucky Mineral (S1)		_ Depleted Dark		-		Other (Explain	in Remarks)	
	eyed Matrix (S4)		_Redox Depres	-	3)		3		
Sandy Re			_Marl (F10) (LR		04) (84) 5			ydrophytic vege	
Stripped	Matrix (S6)	_	_Red Parent Ma	ateriai (F.	21) (WILH	(A 145)	•	ology must be polemated or problemate	
Restrictive I	ayer (if observed):						uriless distui	bed of problems	auc.
Type:	ayer (ii observea).								
Depth (in	ches).						Hydric Soil Present?	Yes	No X
							Tryunc don't resent:		
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P85
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W
	relief (concave, convex, none): None Slope %: 0
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.65763	Long: -87.021662 Datum: NAD83
Soil Map Unit Name: BtA - Brems sand	NWI classification: None
·	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.
Lludraphitia Vagatatian Present?	Is the Compled Area
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No X_
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:
	ii yoo, optional Fronting One 15.
Remarks: (Explain alternative procedures here or in a separate report.) This point is in a dunal depression in a forested dominated by oak and sas	seafrae
This point is in a dunar depression in a reference definitation by sain and sac	isalias.
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) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Sediment Deposits (B2) Oxidized Rhizospheres	<u> </u>
Drift Deposits (B3) — Oxidized Knizospheres — Oxidized Knizospheres Presence of Reduced In	
Algal Mat or Crust (B4) Algal Mat or Crust (B4) Recent Iron Reduction in	· · ·
Iron Deposits (B5) Recent from Reduction in	
	_ · · · /
l 	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Remarks:	
Tolland.	

VEGETATION – Use scientific names of plants. Sampling Point: P85

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Quercus rubra	60	Yes	FACU	Number of Dominant Species
2. Nyssa sylvatica	10	No	FAC	That Are OBL, FACW, or FAC:(A)
3. Acer saccharinum	25	Yes	FACW	Total Number of Dominant
4. Quercus alba	10	No	FACU	Species Across All Strata: 6 (B)
				``
				Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
· -				` ` /
7				Prevalence Index worksheet:
	105	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)				OBL species0 x 1 =0
1. Sassafras albidum	30	Yes	FACU	FACW species 25 x 2 = 50
2. Nyssa sylvatica	5	No	FAC	FAC species25 x 3 =75
3.				FACU species 133 x 4 = 532
4.				UPL species 7 x 5 = 35
5.				Column Totals: 190 (A) 692 (B)
6				Prevalence Index = B/A = 3.64
		· -		
7		·		Hydrophytic Vegetation Indicators:
	35	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10)				2 - Dominance Test is >50%
1. Pteridium aquilinum	20	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Chimaphila maculata	7	No	UPL	4 - Morphological Adaptations (Provide supporting
3. Smilax rotundifolia	10	Yes	FAC	data in Remarks or on a separate sheet)
4. Hamamelis virginiana	3	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Quercus macrocarpa	10	Yes	FACU	<u> </u>
6.	10		17100	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
·				
7.		· 		Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	50	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 20)		•		
				Woody vines – All woody vines greater than 3.28 ft in height.
				Tioigni.
2.				Hydrophytic
3				Vegetation
4		<u> </u>		Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Profile Descr	ription: (Describe to	the dep	oth needed to docu	ument tl	he indica	tor or co	onfirm the absence of indicat	ors.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	3
0-4	10YR 4/2	100					Sandy		
4-15	10YR 5/4	100					Sandy		
15-20	10YR 6/6	100					Sandy		
		 ·							
¹ Type: C=Co	ncentration, D=Deple	tion, RM	=Reduced Matrix, N	MS=Mas	ked Sand	Grains.	² Location: PL=Pore I	_ining, M=Matr	X.
Hydric Soil Ir							Indicators for Proble		
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10)	(LRR K, L, MI	LRA 149B)
Histic Epi	pedon (A2)		Polyvalue Belo	w Surfa	ce (S8) (I	_RR R,	Coast Prairie Red	dox (A16) (LRF	R K, L, R)
Black His	tic (A3)		MLRA 149B)			5 cm Mucky Pear	t or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Thin Dark Surf	ace (S9)	(LRR R	MLRA 1	1 49B) Polyvalue Below	Surface (S8) (I	LRR K, L)
Stratified	Layers (A5)	·	High Chroma S	Sands (S	611) (LRF	R K, L)	Thin Dark Surfac	e (S9) (LRR K ,	, L)
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LR F	R K, L)	Iron-Manganese	Masses (F12)	(LRR K, L, R)
	k Surface (A12)	` ' '	Loamy Gleyed				Piedmont Floodp		
Mesic Sp	odic (A17)		Depleted Matri		,		Red Parent Mate		
	A 144A, 145, 149B)		Redox Dark Su		- 6)		Very Shallow Da		
	ucky Mineral (S1)		Depleted Dark				Other (Explain in	· ·	•
	eyed Matrix (S4)	•	Redox Depress				` ` '	,	
Sandy Re		•	 Marl (F10) (LR		,		³ Indicators of hyd	Irophytic vegeta	ation and
	Matrix (S6)	•	Red Parent Ma		21) (MLF	RA 145)	wetland hydrol		
	(,	•			, (unless disturbe		
	ayer (if observed):								
Type: _									
Depth (inc	ches):						Hydric Soil Present?	Yes	No <u>X</u>
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

City/County: Chesterton/ Porter County Sampling Date: 6/23/2022
State: IN Sampling Point: P86
Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W
relief (concave, convex, none): None Slope %: 0
Long: -87.025224 Datum: NAD83
NWI classification: None
irbed? Are "Normal Circumstances" present? Yes X No
natic? (If needed, explain any answers in Remarks.)
npling point locations, transects, important features, etc.
Is the Sampled Area
within a Wetland? Yes No _X_
If yes, optional Wetland Site ID:
ted by virgina creeper, rose and black raspberry.
Secondary Indicators (minimum of two required)
Surface Soil Cracks (B6)
(B9) Drainage Patterns (B10)
Moss Trim Lines (B16)
Dry-Season Water Table (C2)
(C1) Crayfish Burrows (C8)
on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
ron (C4) Stunted or Stressed Plants (D1)
in Tilled Soils (C6) Geomorphic Position (D2)
, , , ,
Microtopographic Relief (D4) EAC Noutral Test (D5)
FAC-Neutral Test (D5)
<u>:</u>
: Westlered Underslams Breacht2
Wetland Hydrology Present? Yes No _X
revious inspections), if available:
evious irispections), ii available.
1 n n = (

VEGETATION – Use scientific names of plants. Sampling Point: P86 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** Quercus macrocarpa 1. 45 Yes **FACU Number of Dominant Species** 2. Sassafras albidum 60 FACU Yes That Are OBL, FACW, or FAC: 3. Quercus rubra 15 FACU No **Total Number of Dominant** 4. 7 Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 14.3% (A/B) Prevalence Index worksheet:

_	120	_ =Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1. Rosa multiflora	25	Yes	FACU	FACW species 0 x 2 = 0
2. Berberis vulgaris	10	Yes	FACU	FAC species 31 x 3 = 93
3. Rubus occidentalis	7	No	UPL	FACU species246 x 4 =984
4				UPL species 7 x 5 = 35
5				Column Totals: 284 (A) 1112 (B)
6				Prevalence Index = B/A =3.92
7		_		Hydrophytic Vegetation Indicators:
_	42	_=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:10)				2 - Dominance Test is >50%
1. Glechoma hederacea	3	No	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Toxicodendron radicans	5	No	FAC	4 - Morphological Adaptations (Provide supporting
3. Geum canadense	25	Yes	FAC	data in Remarks or on a separate sheet)
4. Erigeron annuus	3	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Parthenocissus quinquefolia	70	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
6. Solidago rugosa	1	No	FAC	be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	107	_=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1. Celastrus orbiculatus	15	Yes	FACU	height.
2				Hydrophytic
3				Vegetation
4				Present?
	15	_=Total Cover		

	ription: (Describe to	the dept				tor or co	onfirm the absence of indic	ators.)	
Depth	Matrix			x Featur					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remar	ks
0-12	10YR 4/2	100					Sandy		
12-20	10YR 6/6	100					Sandy		
			_						
¹ Type: C=Co	ncentration, D=Deple	tion. RM=l	Reduced Matrix. N	 //S=Masl	ked Sand	Grains.	² Location: PL=Pore	e Lining, M=Ma	trix.
Hydric Soil II		,	,				Indicators for Pro		
Histosol (_	Dark Surface (S7)			2 cm Muck (A1	-	
Histic Epi	pedon (A2)		Polyvalue Belo	w Surfac	ce (S8) (I	RR R,	Coast Prairie R	tedox (A16) (LF	RR K, L, R)
Black His	tic (A3)		MLRA 149B)			5 cm Mucky Pe	eat or Peat (S3)	$(LRR\ K,\ L,\ R)$
	Sulfide (A4)	_	Thin Dark Surf		-				
	Layers (A5)	–	High Chroma S				Thin Dark Surfa		•
	Below Dark Surface	^(A11) –	Loamy Mucky			R K, L)) (LRR K, L, R)
	rk Surface (A12)	_	Loamy Gleyed		F2)				9) (MLRA 149B)
	odic (A17) \ 144A, 145, 149B)	_	Depleted Matri Redox Dark Su		·6)		Very Shallow D		tside MLRA 145)
	ucky Mineral (S1)	_	Depleted Dark				Other (Explain		-2)
	eyed Matrix (S4)	_	Redox Depress				Out of (Explain	m rtomanto,	
Sandy Re		_	 Marl (F10) (LR		,		³ Indicators of h	ydrophytic vege	etation and
Stripped I	Matrix (S6)	_	Red Parent Ma	terial (F	21) (MLR	A 145)	wetland hydr	ology must be p	oresent,
							unless distur	bed or problem	atic.
	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil Present?	Yes	NoX
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P87
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W
	relief (concave, convex, none): Concave Slope %: 8
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.648835	Long: -87.040777 Datum: NAD83
Soil Map Unit Name: PIB - Plainfield sand	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Are Vogetation Soil or Hydrology significantly disturbed to the site of the site	
Are Vegetation, Soil, or Hydrologysignificantly distu	
Are Vegetation, Soil, or Hydrologynaturally problem	
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Point is on a forested hillslope north of the wetland. The forest is dominate	ed by witch hazel and suger maple.
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) — Water-Stained Leaves	• • • • • • • • • • • • • • • • • • • •
High Water Table (A2) — Aquatic Fauna (B13) — Mart Deposits (B15)	Moss Trim Lines (B16)
Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2) (C1) Crayfish Burrows (C8)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2) — Oxidized Rhizospheres — Presence of Reduced II	
Drift Deposits (B3) Presence of Reduced II Algal Mat or Crust (B4) Recent Iron Reduction	
	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Rema	,
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
	TAC-Neutral Test (D3)
Field Observations:	
Surface Water Present? Yes No X Depth (inches)	
Water Table Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches)	
Saturation Present? Yes No _X Depth (inches) (includes capillary fringe)	: Wetland Hydrology Present? Yes No _X
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
Boosings (Colourn gauge, monitoring won, actial pricted, pr	eviduo inoposiionoj, ii divaliabio.
Remarks:	

VEGETATION – Use scientific names of plants. Sampling Point: P87

- O	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer saccharinum	70	Yes	FACW	Number of Dominant Species
2. Quercus rubra	15	No	FACU	That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant
4				Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 20.0% (A/B)
7.				Prevalence Index worksheet:
	85	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 20)		•		OBL species 0 x 1 = 0
1. Hamamelis virginiana	45	Yes	FACU	FACW species 74 x 2 = 148
2				FAC species 0 x 3 = 0
3				FACU species 78 x 4 = 312
4.				UPL species 8 x 5 = 40
5.				Column Totals: 160 (A) 500 (B)
6				Prevalence Index = B/A = 3.13
7				Hydrophytic Vegetation Indicators:
	45	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:10)				2 - Dominance Test is >50%
Vaccinium angustifolium	3	No	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Conopholis americana	5	Yes	UPL	4 - Morphological Adaptations (Provide supporting
3. Acer saccharinum	3	No	FACW	data in Remarks or on a separate sheet)
4. Sassafras albidum	7	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Parthenocissus quinquefolia	3	No No	FACU	1
6. Carex albursina	3	No	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Fraxinus pennsylvanica	1	No	FACW	Definitions of Vegetation Strata:
8. Liriodendron tulipifera	<u>'</u> 5	Yes	FACU	
· · · · · · · · · · · · · · · · · · ·		163	1 700	Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	30	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				
3.				Hydrophytic Vegetation
4.				Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet)			L
Tromaino. (moidde photo framboro fiere or off a separ	ato oncot.)			

Profile Description: (Describe to the	lepth needed to doci	ument th	ne indica	tor or co	confirm the absence of indicators.)
Depth Matrix	Redo	x Feature	es		
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture Remarks
0-7 10YR 4/2 100					Sandy
7-20 10YR 5/6 100					Sandy
					·
					
¹ Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, N	//S=Masl	ked Sand	Grains.	·
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	Polyvalue Belo	w Surfac	ce (S8) (I	LRR R,	Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	MLRA 149B	5)			5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Thin Dark Surf	ace (S9)	(LRR R	, MLRA 1	149B) Polyvalue Below Surface (S8) (LRR K, L)
Stratified Layers (A5)	High Chroma S	Sands (S	11) (LRF	R K, L)	Thin Dark Surface (S9) (LRR K, L)
Depleted Below Dark Surface (A11)	Loamy Mucky	Mineral ((F1) (LR F	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)
Thick Dark Surface (A12)	Loamy Gleyed	Matrix (I	F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (A17)	Depleted Matri	-	,		Red Parent Material (F21) (outside MLRA 145
(MLRA 144A, 145, 149B)	Redox Dark Su		6)		Very Shallow Dark Surface (F22)
Sandy Mucky Mineral (S1)	Depleted Dark	-	-		Other (Explain in Remarks)
Sandy Gleyed Matrix (S4)	Redox Depress				
Sandy Redox (S5)	 Marl (F10) (LR	-	,		³ Indicators of hydrophytic vegetation and
Stripped Matrix (S6)	Red Parent Ma		21) (MI F	2Δ 145)	wetland hydrology must be present,
outpool Matrix (oo)	rtour dront we	atoriai (i i	21) (III L I	un 140)	unless disturbed or problematic.
Restrictive Layer (if observed):					
Туре:					
Depth (inches):					Hydric Soil Present? Yes No _X
Remarks:					

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P88				
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W				
·	relief (concave, convex, none): None Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.648735	Long: -87.040898 Datum: NAD83				
Soil Map Unit Name: Fh - Fluvaquents	NWI classification: None				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrology naturally problems					
SUMMARY OF FINDINGS – Attach site map snowing sam	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
This point is wetland seep at the base of a dune slope. Adjacent to the trib	utary of Dunes Creek				
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) X Water-Stained Leaves (I	· · · · · · · · · · · · · · · · · · ·				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1)Hydrogen Sulfide Odor (· · · · · · · · · · · · · · · · · · ·				
Sediment Deposits (B2) Oxidized Rhizospheres of Reduced In	- · · · · · · · · · · · · · · · · · · ·				
Drift Deposits (B3) Presence of Reduced In Recent Iron Reduction in	· · · · · · · · · · · · · · · · · · ·				
Algal Mat or Crust (B4)Recent Iron Reduction in Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark)					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:	<u></u>				
Surface Water Present? Yes No _X Depth (inches):					
Water Table Present? Yes X No Depth (inches):					
Saturation Present? Yes X No Depth (inches):					
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants. Sampling Point: P88 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** 1. 15 **FACW** Ulmus americana Yes Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 5 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: 15 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 40 x 2 = 1. Nyssa sylvatica 10 FAC 80 2. FAC species 10 x 3 = 5 3. FACU species x 4 = 4. UPL species x 5 = 5. Column Totals: 70 (A) 145 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 10 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Smilax glauca **FACU** X 3 - Prevalence Index is ≤3.0¹ 10 Yes **FACW** 4 - Morphological Adaptations¹ (Provide supporting 2 Carex bromoides data in Remarks or on a separate sheet) 15 __ _ 3. Osmundastrum cinnamomeum Yes **FACW** 15 4. Osmunda spectabilis Yes OBL Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 45 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desci	ription: (Describe to	the depth				tor or co	onfirm the absence of indica	ators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)		Type	Loc ²	Texture	Remarks
0-3	5YR 3/2	100					Peat	
3-16	N 2.5/	100					Muck	
1- 0.0							2, ,, ,, ,	
	ncentration, D=Deple	tion, RM=F	Reduced Matrix, N	/IS=Masi	ked Sand	Grains.	² Location: PL=Pore	
Hydric Soil In Histosol (Dark Surface (9 7)				olematic Hydric Soils ³ : () (LRR K, L, MLRA 149B)
	pedon (A2)	_	Polyvalue Belo	-	se (S8) (I	RR R		edox (A16) (LRR K, L, R)
Black His		_	MLRA 149B		oc (00) (1	-1414 14,		at or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Thin Dark Surf	,	(LRR R,	MLRA 1		v Surface (S8) (LRR K, L)
	Layers (A5)	_	— High Chroma S		-			ce (S9) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral ((F1) (LRF	R K, L)	Iron-Manganese	e Masses (F12) (LRR K, L, R)
Thick Dar	rk Surface (A12)	_	 Loamy Gleyed	Matrix (I	- 2)		Piedmont Flood	plain Soils (F19) (MLRA 149B)
Mesic Sp	odic (A17)	_	_ Depleted Matri	x (F3)			Red Parent Mat	erial (F21) (outside MLRA 145)
	A 144A, 145, 149B)	_	Redox Dark Su					ark Surface (F22)
	ucky Mineral (S1)	_	Depleted Dark		-		Other (Explain i	n Remarks)
	eyed Matrix (S4)	_	_Redox Depress		3)		3, ,, ,	
Sandy Re		_	_ Marl (F10) (LR		24) (MI E	A 44E)		drophytic vegetation and plogy must be present,
Stripped i	Matrix (S6)	_	_ Red Parent Ma	ateriai (F.	21) (IVILR	A 145)	•	ped or problematic.
Restrictive L	ayer (if observed):						diliess distait	oca or problematic.
Type:								
Depth (in	ches).						Hydric Soil Present?	Yes X No
Remarks:							,	
Remarks.								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022			
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P89			
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W			
	relief (concave, convex, none): None Slope %: 0			
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.648443	Long: -87.040971 Datum: NAD83			
Soil Map Unit Name: Fh - Fluvaquents	NWI classification: PFO1A			
Are climatic / hydrologic conditions on the site typical for this time of year?				
Are Vegetation, Soil, or Hydrologysignificantly distu				
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area			
Hydric Soil Present? Yes X No	within a Wetland? Yes X No			
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland 28			
Remarks: (Explain alternative procedures here or in a separate report.)				
Point is in a small depression between wetland 27 and Stream 3.				
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) X Water-Stained Leaves (_			
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide Odor				
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduced In	ron (C4) Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)Recent Iron Reduction i				
Iron Deposits (B5) Thin Muck Surface (C7)	,			
Inundation Visible on Aerial Imagery (B7)Other (Explain in Rema				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? Yes No _X Depth (inches)				
Water Table Present? Yes No X Depth (inches)				
Saturation Present? Yes No X Depth (inches)	: Wetland Hydrology Present? Yes X No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	ravious inspections) if available:			
Describe Recorded Data (stream gauge, monitoring well, aenai priotos, pr	evious inspections, ii available.			
Remarks:				

VEGETATION – Use scientific names of plants. Sampling Point: P89 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 20 OBL species FACW species 55 x 2 = **FACW** 110 Lindera benzoin 2. Fraxinus pennsylvanica **FACW** FAC species 11 x 3 = 7 3. FACU species x 4 = 4. UPL species x 5 = 5. Column Totals: 83 (A) 181 6. Prevalence Index = B/A = 2.18 7. **Hydrophytic Vegetation Indicators:** 25 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% Herb Stratum (Plot size: Arisaema triphyllum FAC X 3 - Prevalence Index is ≤3.0¹ 7 FAC 4 - Morphological Adaptations¹ (Provide supporting 2 Ranunculus hispidus No data in Remarks or on a separate sheet) 10 ___ 3. Yes OBL Leersia oryzoides 4. Carex intumescens 20 Yes **FACW** Problematic Hydrophytic Vegetation¹ (Explain) 7 No **FACW** 5. Onoclea sensibilis ¹Indicators of hydric soil and wetland hydrology must 3 **FACW** be present, unless disturbed or problematic. 6. Laportea canadensis No 7 No **FACU Definitions of Vegetation Strata:** 7. Allium canadense 8. Symphyotrichum lateriflorum No FAC Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 58 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No_ Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			k Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 4/1	_87_	10YR 5/1	8	D	M	Loamy/Clayey		
			10YR 4/6	5	<u>C</u>	M		Prominent redox concentrations	
8-12	10YR 5/1	51	10YR 4/1	25	<u>D</u>	M	Loamy/Clayey		
			10YR 6/2	6	<u>D</u>	M		_	
			10YR 5/6	6	<u>C</u>	M		Prominent redox concentrations	
			10YR 5/8	12	C	M		Prominent redox concentrations	
12-20	10YR 5/2	60	10YR 5/1	10	<u>D</u>	<u>M</u>	Loamy/Clayey		
			10YR 6/2	15	<u>D</u>	<u>M</u>			
			10YR 5/8	15	<u>C</u>	<u>M</u>		Prominent redox concentrations	
	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	S=Masl	ked Sand	Grains.		L=Pore Lining, M=Matrix.	
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :									
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLRA 149B Coast Prairie Redox (A16) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, R)									
Black His	ipedon (A2)		MLRA 149B)		ce (58) (I	LKK K,		rairie Redox (A16) (LRR K, L, R)	
	n Sulfide (A4)		Thin Dark Surfa		(I PP P	MIDA		e Below Surface (S8) (LRR K, L, R)	
	Layers (A5)		High Chroma S	, ,	•				
	Below Dark Surface	(A11)	Loamy Mucky N				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)		
	rk Surface (A12)	(/ () /)	Loamy Gleyed			· · · · · · · · · · · · · · · · · · ·		nt Floodplain Soils (F19) (MLRA 149B)	
	oodic (A17)		X Depleted Matrix		· <i>-</i> /			ent Material (F21) (outside MLRA 145)	
	A 144A, 145, 149B)		Redox Dark Su		6)			allow Dark Surface (F22)	
	ucky Mineral (S1)		— Depleted Dark					xplain in Remarks)	
	leyed Matrix (S4)		Redox Depress				`	,	
	edox (S5)		Marl (F10) (LRF		,		³ Indicators of hydrophytic vegetation and		
	Matrix (S6)		Red Parent Mat		21) (MLF	RA 145)	wetland hydrology must be present,		
5							unless	disturbed or problematic.	
Type:	_ayer (if observed):								
Depth (in	iches):						Hydric Soil Presei	nt? Yes X No	
Remarks:									

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022				
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P90				
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W				
	relief (concave, convex, none): None Slope %: 0				
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.648367	Long: <u>-87.041013</u> Datum: <u>NAD83</u>				
Soil Map Unit Name: Fh - Fluvaquents	NWI classification: PF01A				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam					
Hodronboth Variation Broads	In the Committed Asses				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No _X Yes X No	Is the Sampled Area within a Wetland? Yes No X				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No _X If yes, optional Wetland Site ID:				
	11 you, optional Woulding Oile 15.				
Remarks: (Explain alternative procedures here or in a separate report.) This point in on a small upland rise between the drainage way and the flow	ving stream channel				
This point in on a small uplant use between the trainage way and the now	ang stream chainlei.				
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) Water-Stained Leaves ((B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres					
Drift Deposits (B3) Presence of Reduced In	<u> </u>				
Algal Mat or Crust (B4) Recent Iron Reduction in	• , , , , , , , , , , , , , , , , , , ,				
Iron Deposits (B5) Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No X Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:				
Remarks:					
Tromano.					

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:30)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Tilia americana	30	Yes	FACU	Number of Dominant Species			
2. Quercus rubra	15	No	FACU	That Are OBL, FACW, or FAC:4 (A)			
3. Liriodendron tulipifera	60	Yes	FACU	Total Number of Dominant			
4. Acer saccharinum	40	Yes	FACW	Species Across All Strata: 8 (B)			
5				Percent of Dominant Species			
6.				That Are OBL, FACW, or FAC: 50.0% (A/B)			
7.		· <u></u>		Prevalence Index worksheet:			
	145	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 20)		•		OBL species 0 x 1 = 0			
1. Fraxinus pennsylvanica	15	Yes	FACW	FACW species 83 x 2 = 166			
2. Rosa multiflora	7	No	FACU	FAC species 75 x 3 = 225			
3. Liriodendron tulipifera	10	Yes	FACU	FACU species 169 x 4 = 676			
4. Quercus alba	7	No	FACU	UPL species 0 x 5 = 0			
5. Lindera benzoin	20	Yes	FACW	Column Totals: 327 (A) 1067 (B)			
6. Vaccinium angustifolium	10	Yes	FACU	Prevalence Index = B/A = 3.26			
7. Ribes cynosbati	7	No No	FACU	Hydrophytic Vegetation Indicators:			
	81	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: 10)		,		2 - Dominance Test is >50%			
Amphicarpaea bracteata	65	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹			
Podophyllum peltatum	15	No	FACU	4 - Morphological Adaptations (Provide supporting			
Ranunculus hispidus	7	No	FAC	data in Remarks or on a separate sheet)			
	3	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
				Froblematic Hydrophytic vegetation (Explain)			
5. Hamamelis virginiana	5	No No	FACU	¹ Indicators of hydric soil and wetland hydrology must			
6. Onoclea sensibilis	3	No No	FACW	be present, unless disturbed or problematic.			
7. <u>Toxicodendron radicans</u>	3	<u>No</u>	<u>FAC</u>	Definitions of Vegetation Strata:			
8				Tree – Woody plants 3 in. (7.6 cm) or more in			
9				diameter at breast height (DBH), regardless of height.			
10				Sapling/shrub – Woody plants less than 3 in. DBH			
11				and greater than or equal to 3.28 ft (1 m) tall.			
12				Herb – All herbaceous (non-woody) plants, regardless			
	101	=Total Cover		of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in			
1				height.			
2				l			
3				Hydrophytic Vegetation			
4.				Present? Yes No X			
		=Total Cover					
Remarks: (Include photo numbers here or on a separa	ate sheet.)						

Sampling Point: P90

VEGETATION Continued – Use scientific names of plants. Sampling Point: Absolute Dominant Indicator % Cover Species? Tree Stratum Status **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 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 vines - All woody vines greater than 3.28 ft in height. 145 =Total Cover Sapling/Shrub Stratum 8. Ulmus americana ______ <u>5</u> <u>No</u> <u>FACW</u> 9. 10. ____ 81 =Total Cover Herb Stratum 21. 101 =Total Cover Woody Vine Stratum 7. =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features			
(inches) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks			
0-8 10YR 3/2 100 Sandy			
8-13 10YR 4/2 96 10YR 5/6 4 C M Loamy/Clayey Prominent redox conc	entrations		
13-20 10YR 5/1 60 10YR 4/1 10 D M Loamy/Clayey			
10YR 5/6 10 C M Prominent redox conc	entrations		
7.5YR 5/8 14 C M Prominent redox conc	entrations		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: Indicators for Problematic Hydric So	oils³:		
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLR	A 149B)		
Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K	(, L, R)		
Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LF	R K, L, R)		
Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LR	R K, L)		
Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR K, L	-		
	Iron-Manganese Masses (F12) (LRR K, L, R)		
	Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Red Parent Material (F21) (outside MLRA 145)		
(MLRA 144A, 145, 149B) Redox Dark Surface (F6) Very Shallow Dark Surface (F22)	·,		
	Other (Explain in Remarks)		
Sandy Gleyed Matrix (S4) Redox Depressions (F8)			
_ · · · · · · · · · _ · · · · · · · · · · · · .	on and		
	³ Indicators of hydrophytic vegetation and		
	wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Layer (if observed):			
Type:			
· · · · — — — — — — — — — — — — — — — —	No		
Remarks:			

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022						
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P91						
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W						
<u>'</u>	relief (concave, convex, none): None Slope %: 0						
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.6483	Long: -87.041083 Datum: NAD83						
Soil Map Unit Name: Fh - Fluvaquents	NWI classification: PFO1A						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrologysignificantly distur							
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Lludraphutic Vagatation Procent? Vag. Y. No.	Is the Sampled Area						
Hydrophytic Vegetation Present? Hydric Soil Present? Yes X No Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Stream 3						
Remarks: (Explain alternative procedures here or in a separate report.)							
Point is on a stream terrace within a flowing creek.							
1 one is a susual terrase							
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) X Water-Stained Leaves (_						
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)						
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)						
X Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)						
X Drift Deposits (B3) Presence of Reduced Ir	ron (C4) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4) Recent Iron Reduction i	in Tilled Soils (C6) X Geomorphic Position (D2)						
Iron Deposits (B5) Thin Muck Surface (C7)	· · · · · · · · · · · · · · · · · · ·						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	rks)Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No X Depth (inches):							
Water Table Present? Yes No X Depth (inches):							
Saturation Present? Yes No _X Depth (inches):	: Wetland Hydrology Present? Yes X No						
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:						
Remarks:							
Remarks.							

VEGETATION – Use scientific names of plants. Sampling Point: P91 Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status **Dominance Test worksheet:** 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 3 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: =Total Cover Sapling/Shrub Stratum (Plot size: 20 OBL species FACW species 13 x 2 = 1. 26 4 2. FAC species x 3 = 0 3. FACU species x 4 = 4. UPL species x 5 = 5. Column Totals: 24 (A) 45 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 10) X 2 - Dominance Test is >50% Glyceria striata OBL X 3 - Prevalence Index is ≤3.0¹ 1 No FAC 4 - Morphological Adaptations¹ (Provide supporting 2 Persicaria longiseta data in Remarks or on a separate sheet) 3. Cryptotaenia canadensis No FAC 4. Bidens frondosa 5 Yes **FACW** Problematic Hydrophytic Vegetation¹ (Explain) Impatiens capensis 7 Yes **FACW** 5. ¹Indicators of hydric soil and wetland hydrology must 6. Bidens connata 1 **FACW** be present, unless disturbed or problematic. No 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 24 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic 3. Vegetation No Present? Yes X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			x Feature		. 2	- .	Davis and a		
(inches)	Color (moist)	<u> </u>	or (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks		<u> </u>
0-15	10YR 6/2	100					Sandy	Cı	reek be	d
	_									
1- 0.0							2, ,, 5,			
	ncentration, D=Deple	tion, RM=Redu	ced Matrix, N	/IS=Mask	ed Sand	Grains.		=Pore Lining, N		
Hydric Soil II		D	ark Surface /	C7\				r Problematic	-	
Histosol (pedon (A2)		ark Surface (olyvalue Belo	-	o (S8) (I	DD D		k (A10) (LRR k iirie Redox (A16		
Black His			MLRA 149B		,e (30) (L	.KK K,		ky Peat or Pea		
	Sulfide (A4)		nin Dark Surf	,	/I DD D	MI DA 1		Below Surface		-
	Layers (A5)		gh Chroma S					Surface (S9) (•
	Below Dark Surface (amy Mucky					ganese Masses		-
	k Surface (A12)		amy Gleyed			, _ /				(MLRA 149B)
	odic (A17)		epleted Matri	-	_,					ide MLRA 145)
	A 144A, 145, 149B)		edox Dark Su		6)			low Dark Surfa		
	ucky Mineral (S1)		epleted Dark					plain in Remarl		,
	eyed Matrix (S4)		· edox Depres					•	,	
Sandy Re			arl (F10) (LR	-	,		³ Indicators	s of hydrophytic	c vegeta	ation and
			ed Parent Ma		21) (MLR	A 145)			nust be present,	
							unless	disturbed or pro	blemat	ic.
Restrictive L	ayer (if observed):									
Type: _			_							
Depth (in	ches):		_				Hydric Soil Present	? Yes	X	No
Remarks:										
Point is within	an active stream cha	annel.								

WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region

See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

Project/Site: Marquette Greenway	City/County: Chesterton/ Porter County Sampling Date: 6/23/2022					
Applicant/Owner: Glenn Peterson	State: IN Sampling Point: P91					
Investigator(s): Evan Troutman, Steven McDaniel and Deirdre James	Section, Township, Range: SE 1/4 NE 1/4 S17 T37N R5W					
	relief (concave, convex, none): None Slope %: 0					
Subregion (LRR or MLRA): LRR L, MLRA 97 Lat: 41.646884	Long: -87.043891 Datum: NAD83					
Soil Map Unit Name: BtA - Brems sand	NWI classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
, , , , , , , , , , , , , , , , , , ,						
Are Vegetation, Soil, or Hydrologysignificantly distur	·					
Are Vegetation, Soil, or Hydrologynaturally problems						
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No _X_	Is the Sampled Area					
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_					
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
Point was taken in an upland south of Pottawattomie Trail.						
L HYDROLOGY						
	Consider the disease (minimum of two required)					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water Steined Leaves (Surface Soil Cracks (B6)					
Surface Water (A1) — Water-Stained Leaves (
High Water Table (A2) — Aquatic Fauna (B13) — Marl Deposits (B15)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15) Livetage Region (B4)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (<u> </u>					
Sediment Deposits (B2)Oxidized Rhizospheres						
Drift Deposits (B3) Presence of Reduced In	• • • • • • • • • • • • • • • • • • • •					
Algal Mat or Crust (B4)Recent Iron Reduction ii	. , , , ,					
Iron Deposits (B5) Thin Muck Surface (C7)	_ · · · /					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _X Depth (inches):						
Water Table Present? Yes No X Depth (inches):						
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes No _X					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
Remarks.						

VEGETATION – Use scientific names of plants. Sampling Point: P91 Absolute Dominant Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet: FACU** 1. Quercus rubra Yes Number of Dominant Species 2. Sassafras albidum 20 Yes **FACU** That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: 6 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: 55 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 20 OBL species **FACW** species 0 x 2 = 1. FAC 0 Crataegus mollis 2. Rubus allegheniensis Yes **FACU** FAC species 15 x 3 = 45 3. Euonymus alatus 10 No UPL FACU species 139 x 4 = 556 4. UPL species 10 x 5 = 5. Column Totals: 164 651 6. Prevalence Index = B/A = 7. **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation 85 =Total Cover Herb Stratum (Plot size: 10) 2 - Dominance Test is >50% Potentilla simplex **FACU** 3 - Prevalence Index is ≤3.01 2. Rosa multiflora 10 Yes **FACU** 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 3. 4. Problematic Hydrophytic Vegetation¹ (Explain) 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in 9. diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 17 =Total Cover of size, and woody plants less than 3.28 ft tall. 20 Woody Vine Stratum (Plot size: Woody vines - All woody vines greater than 3.28 ft in Celastrus orbiculatus **FACU** height. 2. Hydrophytic 3. Vegetation Present? Yes No X =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

ENG FORM 6116-8, JUL 2018

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			x Feature	es					
(inches) Color	(moist)	% Colo	or (moist)		Type ¹	Loc ²	Texture	Remarks		<u>s</u>
0-910YI	R 4/3 1	00					Sandy			
9-20 10YI	R 6/6 1	00					Sandy			
										
17				40. March			21 4i DI	l Dans Lie	- i NA NA-4-	
¹ Type: C=Concentratio		n, RIVI=Reduc	ced Matrix, N	/IS=IVIask	ked Sand	Grains.	² Location: Pl			
Hydric Soil Indicators	:	Do	unic Crimfono (C7\			Indicators fo		natic Hydric LRR K, L, M	
Histosol (A1)	2)		irk Surface (lyvalue Belo	-	o (CO) (I	DD D				
Histic Epipedon (A2 Black Histic (A3)	<u>~)</u>		MLRA 149B		e (36) (I	-KK K,			x (A16) (LRI x Post (S3)	(LRR K, L, R)
Hydrogen Sulfide (A)	۸ ۵)		in Dark Surf	•	/I DD D	MIDA		-	urface (S8) (
Stratified Layers (A	•		gh Chroma S						(S9) (LRR K	
Depleted Below Da	•		amy Mucky l							•
	· · · · · · · · · · · · · · · · · · ·					K N, L)		-		(LRR K, L, R)
Thick Dark Surface			amy Gleyed	-	-2)				-) (MLRA 149B)
Mesic Spodic (A17)			pleted Matri		c)					side MLRA 145)
(MLRA 144A, 14			dox Dark Su	-	-				Surface (F2	2)
Sandy Mucky Mine	, ,		pleted Dark				Other (Ex	xplain in R	emarks)	
Sandy Gleyed Matr	1X (S4)		dox Depres	-	5)		31			
		rl (F10) (LRR K, L) d Parent Material (F21) (MLRA 145)				³ Indicators of hydrophytic vegetation and				
Stripped Matrix (S6)Red		d Parent Ma	aterial (F2	21) (MLR	(A 145)		wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if ol	bserved):									
Туре:			_							
Depth (inches):			_				Hydric Soil Preser	nt?	Yes	No X
Remarks:										
inindated.										

APPENDIX D
PHOTOS

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Photo 1. Data point P1 was in Wetland 17. Facing north, May 24, 2022.



Photo 2. Data point P1 was in Wetland 17. Facing east, May 24, 2022.



Photo 3. Data point P3 was in Wetland 21. Facing north, May 24, 2022.



Photo 4. Data point P3 was in Wetland 21. Facing west, May 24, 2022.



Photo 5. Data point P5 was in Wetland 24. Facing north, May 24, 2022.



Photo 6. Data point P5 was in Wetland 24. Facing south, May 24, 2022.



Photo 7. Data point P6 was in Wetland 24. Facing north, May 24, 2022.



Photo 8. Data point P6 was in Wetland 24. Facing south towards Furnessville Rd., May 24, 2022.



Photo 9. Data point P8 was in Wetland 25. Facing north, May 24, 2022.



Photo 10. Data point P8 was in Wetland 25. Facing west, May 24, 2022.



Photo 11. Data point P10 in a suspected wetland area that did not qualify. Facing east on May 24, 2022.



Photo 12. Data point P10 (red flag) in a suspect area. Facing west on May 24, 2022.



Photo 13. Data point P12 (red flag) in Wetland 26 facing west on May 24, 2022.



Photo 14. Data point P12 (red flag) in Wetland 26, facing north on May 24th, 2022.



Photo 15. Data point P14 (red flag) in Wetland 23. Facing north on May 24, 2022.



Photo 16. Data point P14 (red flag) in Wetland 23. Facing south on May 24, 2022.



Photo 17. Data point P16 (red flag) in Wetland 22, an interdunal wetland. Facing south on May 24, 2022.



Photo 18. Data point P16 (red flag) in Wetland 22. Facing east on May 24, 2022.



Photo 19. Data point P18 in Wetland 20, the same interdunal wetland complex as Wetland 22. Facing south on May 24, 2022.



Photo 20. Data point P18 (red flag) in Wetland 20. Facing north on May 24, 2022.



Photo 21. Data point P22 (red flag) in Wetland 18, a degraded interdunal wetland at the northeast corner of the intersection of Teale Drive and Furnessville Road. Facing east, May 27, 2022.



Photo 22. Data point P22 (red flag) in Wetland 18. Facing west on May 27, 2022.



Photo 23. Data point P24 (red flag) in Wetland 17, an interdunal wetland. Facing east on May 27, 2022



Photo 24. Data point P24 (red flag) in Wetland 17. Facing south on May 27, 2022



Photo 25. Data point P26 (red flag) in Wetland 17, an interdunal wetland. Facing south on May 27, 2022



Photo 26. Data point P26 (red flag) in Wetland 17. Facing north on May 27, 2022



Photo 27. Data point P27 (red flag) in Wetland 16, an interdunal wetland. This forested wetland was dominated by common holly (*Ilex aquifolium*). Facing west on May 27, 2022



Photo 28. Data point P27 (red flag) in Wetland 16. Facing east on May 27, 2022



Photo 29. Data point P29 (red flag) in Wetland 15, an interdunal wetland west of Teal Drive. Facing northeast on June 3, 2022.



Photo 30. Data point P29 (red flag) in Wetland 15. Facing southeast on June 3, 2022.



Photo 31. Data point P31 (red flag) in Wetland 14, an interdunal wetland east of Teale Drive. Facing northeast on June 3, 2022.



Photo 31.1. Data point 31 in Wetland 14. Facing southwest on June 3, 2022.



Photo 32. Data point P33 (red flag) in Wetland 12, a shallow depression adjacent to Highway 12. Facing northeast on May 27, 2022.



Photo 33. Data point P33 (red flag) in Wetland 12. Facing southeast on June 3, 2022.



Photo 34. Data point P35 (red flag) in Wetland 11, a small depressional forested wetland just south of U.S. Highway 12. Facing North on June 3, 2022



Photo 35. Data point P35 (red flag) in Wetland 11. Facing west on June 3, 2022



Photo 36. Data point P37 (red flag) in Wetland 13, a small, forested wetland between Highway 12 and the Calumet Dunes system to the south. Facing North on June 3, 2022.



Photo 37. Data point P37 (red flag) in Wetland 13. Facing west on June 3, 2022.



Photo 38. Data point P39 in Wetland 29. Facing south on June 9, 2022.



Photo 39. Data point P39 in Wetland 29. Facing west on June 9, 2022.



Photo 40. Data point P41 in Wetland 30. Facing east on June 9, 2022.



Photo 41. Data point P41 in Wetland 30. Facing north on June 9, 2022.



Photo 42. Data point 44 in Wetland 1. Facing northwest on June 9, 2022.



Photo 43. Data point 44 in Wetland 1. Facing northeast on June 9, 2022.



Photo 44. Data point 46 in Wetland 2. Facing southeast on June 9, 2022.



Photo 45. Data point 46 in Wetland 2. Facing southwest on June 9, 2022.



Photo 46. Data point P48 (red flag) in Wetland 1. Facing north on June 17, 2022.



Photo 47. Data point P48 (red flag) in Wetland 1. Facing east on June 17, 2022.



Photo 48. Data point P50 (red flag) in Wetland 1. Facing south on June 17, 2022.



Photo 49. Data point P50 (red flag) in Wetland 1. Facing west on June 17, 2022



Photo 50. Data point P52 (red flag) in Wetland 1. Facing north on June 17, 2022.



Photo 51. Data point P52 (red flag) in Wetland 1. Facing east on June 17, 2022.



Photo 52. Data point P53 (red flag) in Wetland 1. Facing east along the route of what will be boardwalk trail on June 17, 2022.



Photo 53. Data point P53 (red flag) in Wetland 1. Facing south on June 17, 2022.



Photo 54. Data point P54 (red flag) in Wetland 1. Facing northwest on June 17, 2022.



Photo 55. Data point P54 (red flag) in Wetland 1. Facing northeast on June 17, 2022. This is where the boardwalk trail will connect to the paved trail along the existing Calumet Trail.



Photo 56. Data point P56 (red flag) in Wetland 2. Facing northeast on June 17, 2022.



Photo 57. Data point P56 in Wetland 2. Facing southeast on June 17, 2022.



Photo 58. Data point P57 in Wetland 1 north of the Beverly Shores Train Station. Facing east on June 22, 2022.



Photo 59. Data point P57 (red flag) in Wetland 1. Facing west on June 22, 2022.



Photo 60. Data point P59 in Wetland 4. Facing northwest on June 22, 2022.



Photo 61. Data point P59 in Wetland 4. Facing southwest on June 22, 2022.



Photo 62. Data point P61 (red flag) in Wetland 3. Facing northeast on June 22, 2022



Photo 63. Data point P61 in Wetland 3. Facing northwest on June 22, 2022.



Photo 64. Data point P62 in Wetland 4. Facing north on June 22, 2022.



Photo 65. Data point P62 in Wetland 4. Facing south on June 22, 2022.



Photo 66. Data point P64 in Wetland 4. Facing east on June 22, 2022.



Photo 67. Data point 64 in Wetland 4. Facing south on June 22, 2022.



Photo 68. Data point P65 in Wetland 4. Facing north on June 22, 2022.



Photo 69. Data point P65 in Wetland 4. Facing south on June 22, 2022.



Photo 70. Data point P67 in Wetland 4. Facing east on June 22, 2022.



Photo 71. Data point P67 in Wetland 4. Facing south on June 22, 2022.



Photo 72. Data point P69 in Stream 2. Facing north on June 22, 2022.



Photo 73. Data point 69 in Stream 2. Facing south on June 22, 2022.



Photo 74. Data point P70 (red flag) in Wetland 6. Facing east on June 22, 2022.



Photo 75. Data point P70 in Wetland 6. Facing west on June 22, 2022.



Photo 76. Data point P71 (red flag) in Wetland 7. Facing east on June 22, 2022.



Photo 77. Data point P71 (red flag) in Wetland 7. Facing south on June 22, 2022.



Photo 78. Data point P73 in Wetland 5. Facing south on June 22, 2022.



Photo 79. Data point P73 in Wetland 5. Facing south on June 22, 2022.



Photo 80. Data point P74 in Wetland 7. Facing north on June 22, 2022.



Photo 81. Data point P74 in Wetland 7. Facing south on June 22, 2022.



Photo 82. Data point P76 in Wetland 7. Facing east on June 22, 2022.



Photo 83. Data point P76 in Wetland 7. Facing west on June 22, 2022.



Photo 84. Data point P78 in Wetland 8. Facing east on June 22, 2022.



Photo 85. Data point P78 in Wetland 8. Facing south on June 22, 2022.



Photo 86. Data point P79 in Wetland 9. Facing north on June 22, 2022



Photo 87. Data point P79 in Wetland 9. Facing east on June 22, 2022.



Photo 88. Data point P81 in Wetland 10. Facing north on June 22, 2022.



Photo 89. Data point P81 in Wetland 10. Facing south on June 22, 2022.



Photo 90. Data point P88 in Wetland 27. Facing east on June 23, 2022.



Photo 91. Data point P88 in Wetland 27. Facing south on June 23, 2022.



Photo 92. Data point P89 in Wetland 28. Facing east on June 23, 2022.



Photo 93. Data point P89 in Wetland 28. Facing west on June 23, 2022.

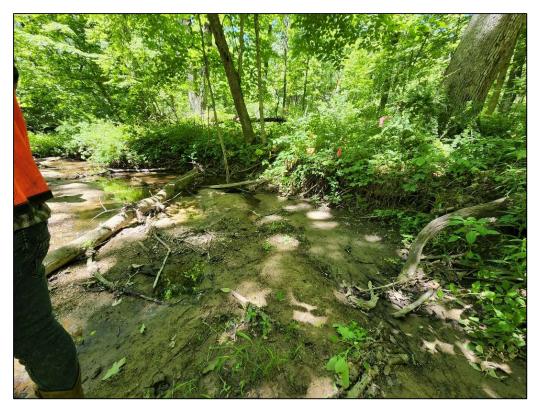


Photo 94. Data point P91 (red flag) in Stream 3, Munson Ditch, a tributary of Dunes Creek. Facing south on June 22, 2022.



Photo 95. Data point P91 (red flag) in Stream 3. Facing west on June 22, 2022.



Photo 96. Data point P2 was in an upland area near Wetland 17. Facing north, May 24, 2022.



Photo 97. Data point P2 was in an upland area near Wetland 17 along Furnessville Road. Facing west, May 24, 2022.



Photo 98. Data point P4 was in an upland area near Wetland 21. Facing east along Furnessville Road, May 24, 2022.



Photo 99. Data point P4 was in an upland area near Wetland 21. Facing west, May 24, 2022.



Photo 100. Data point P7 was in an upland area near Wetland 24. Facing north, May 24, 2022.



Photo 101. Data point P7 was in an upland area near Wetland 24. Facing south, May 24, 2022.



Photo 102. Data point P9 was in an upland area near Wetland 25. Facing north, May 24, 2022.



Photo 103. Data point P9 was in an upland area near Wetland 25. Facing south, May 24, 2022.



Photo 104. Data point P11 was in an upland area along Hadenfelt Road. Facing north, May 24, 2022.



Photo 105. Data point P11 was in an upland area near Wetland 22. Facing east, May 24, 2022.



Photo 106. Data point P13 was in an upland area near Wetland 26. Facing east along Furnessville Road, May 24, 2022.



Photo 107. Data point P13 was in an upland area near Wetland 26. Facing south, May 24, 2022.



Photo 108. Data point P15 was in an upland area near Wetland 23. Facing east towards Veden Road, May 24, 2022. Wetland 22 is visible across the street.



Photo 109. Data point P15 was in an upland area near Wetland 23. Facing west, May 24, 2022.



Photo 110. Data point P17 was in an upland area along the road edge near Wetland 22. Facing east along Furnessville Road, May 24, 2022.



Photo 111. Data point P17 was in an upland area near Wetland 22. Facing south, May 24, 2022.



Photo 112. Data point P23 was in an upland area near Wetland 18. Facing east, May 27, 2022.



Photo 113. Data point P23 was in an upland area near Wetland 18. Facing south, May 27, 2022.



Photo 114. Data point P25 was in an upland area near Wetland 17. Facing east, May 27, 2022.



Photo 115. Data point P25 was in an upland area near Wetland 17. Facing south, May 27, 2022.



Photo 116. Data point P28 was in an upland area near Wetland 16. Facing east, May 27, 2022.



Photo 117. Data point P28 was in an upland area near Wetland 16. Facing west, May 27, 2022.



Photo 118. Data point P30 was in an upland area near Wetland 15. Facing north, June 3, 2022.



Photo 119. Data point P30 was in an upland area near Wetland 15. Facing east, June 3, 2022.



Photo 120. Data point P32 was in an upland area near Wetland 14 on Teale Drive. Facing north, June 3, 2022.



Photo 121. Data point P32 was in an upland area on Teale Drive. Facing west, June 3, 2022.



Photo 122. Data point P36 was in an upland area near Wetland 11. Facing north, June 3, 2022.



Photo 123. Data point P36 was in an upland area near Wetland 11. Facing south, June 3, 2022.



Photo 124. Data point P38 was in an upland area near Wetland 13. Facing east, June 3, 2022.



Photo 125. Data point P38 was in an upland area near Wetland 11. Facing west, June 3, 2022.



Photo 126. Data point P47 was in an upland area near Wetland 1. Facing northwest, June 17, 2022.



Photo 127. Data point P47 was in an upland area near Wetland 1. Facing southeast, June 17, 2022.



Photo 128. Data point P49 was in an upland area near Wetland 1. Facing east, June 17, 2022.



Photo 129. Data point P49 was in an upland area near Wetland 1. Facing south, June 17, 2022.



Photo 130. Data point P51 was on an unnamed roadbed where the trail will be located. Facing east, June 17, 2022.



Photo 131. Data point P51 on a roadbed. Facing west, June 17, 2022.



Photo 132. Data point P55 was in an upland area near Wetland 1. Facing north, June 17, 2022



Photo 133. Data point P55 was in an upland area near Wetland 1. Facing south, June 17, 2022



Photo 134. Data point P58 was in an upland area near Wetland 1. Facing south, June 22, 2022



Photo 135. Data point P58 was in an upland area near Wetland 1. Facing east, June 22, 2022



Photo 136. Data point P60 was in an upland area near Wetland 4. Facing northwest, June 22, 2022.



Photo 137. Data point P60 was in an upland area near Wetland 4. Facing northeast, June 22, 2022.



Photo 138. Data point P63 was in an upland area near Wetland 4. Facing north, June 22, 2022.



Photo 139. Data point P63 was on an old roadbed, Service Avenue. Facing south, June 22, 2022.



Photo 140. Data point P68 was in an upland area near Stream 2, Wieland Ditch. Facing east, June 22, 2022.



Photo 141. Data point P68 was in an upland area near Stream 2. Facing west, June 22, 2022.



Photo 142. Data point P72 was on Service Avenue, an old roadbed between Wetlands 5 and 7. Facing northeast, June 22, 2022.



Photo 143. Data point P72 along the trail route. Facing southwest, June 22, 2022.



Photo 144. Data point P75 was on an old roadbed, Service Avenue between Wetlands 5 and 7. Facing north, June 22, 2022.



Photo 145. Data point P75 on Service Avenue. Facing west, June 22, 2022.



Photo 146. Data point P80 was in an upland area near Wetland 9. Facing north, June 22, 2022.



Photo 147. Data point P80 was in an upland area near Wetland 10. Facing south, June 22, 2022.



Photo 148. Data point P87 was in an upland area near Wetland 27. Facing south, June 23, 2022.



Photo 149. Data point P87 was in an upland area near Wetland 27. Facing west, June 23, 2022.



Photo 150. Data point P90 was in the upland floodplain adjacent to Stream 3. Facing east, June 23, 2022.



Photo 151. Data point P90 was in an upland area near Stream 3. Facing west, June 23, 2022.

APPENDIX E ANTECEDENT PRECIPITATION DATA

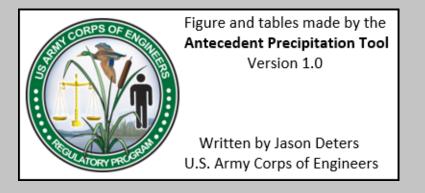
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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	41.663701, -87.009776
Observation Date	2022-04-01
Elevation (ft)	615.04
Drought Index (PDSI)	Mild wetness

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-04-01	1.343307	2.545276	3.905512	Wet	3	3	9
2022-03-02	1.422047	2.579134	3.354331	Wet	3	2	6
2022-01-31	1.454331	3.119685	1.370079	Dry	1	1	1
Result							Wetter than Normal - 16



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
INDIANA DUNES NL	41.6317, -87.0881	680.118	4.609	65.078	2.374	10525	45
PORTER 0.5 S	41.6198, -87.0833	652.887	0.859	27.231	0.41	27	2
PORTER 0.6 S	41.6189, -87.0825	636.155	0.93	43.963	0.459	710	43
PORTER 2.1 N	41.657, -87.0763	659.121	1.851	20.997	0.872	6	0
KOUTS 2.8 N	41.596, -87.0606	652.887	2.846	27.231	1.358	9	0
PORTAGE 2.8 E	41.5865, -87.1282	632.874	3.748	47.244	1.864	1	0
PORTAGE 0.9 ESE	41.5825, -87.1656	645.997	5.252	34.121	2.543	1	0
CHESTERTON 4.2 E	41.5943, -86.9752	684.055	6.379	3.937	2.896	1	0
VALPARAISO 5NNE	41.5436, -87.0319	869.095	6.744	188.977	4.309	8	0
VALPARAISO WTR WKS	41.5114, -87.0378	799.869	8.709	119.751	4.962	65	0