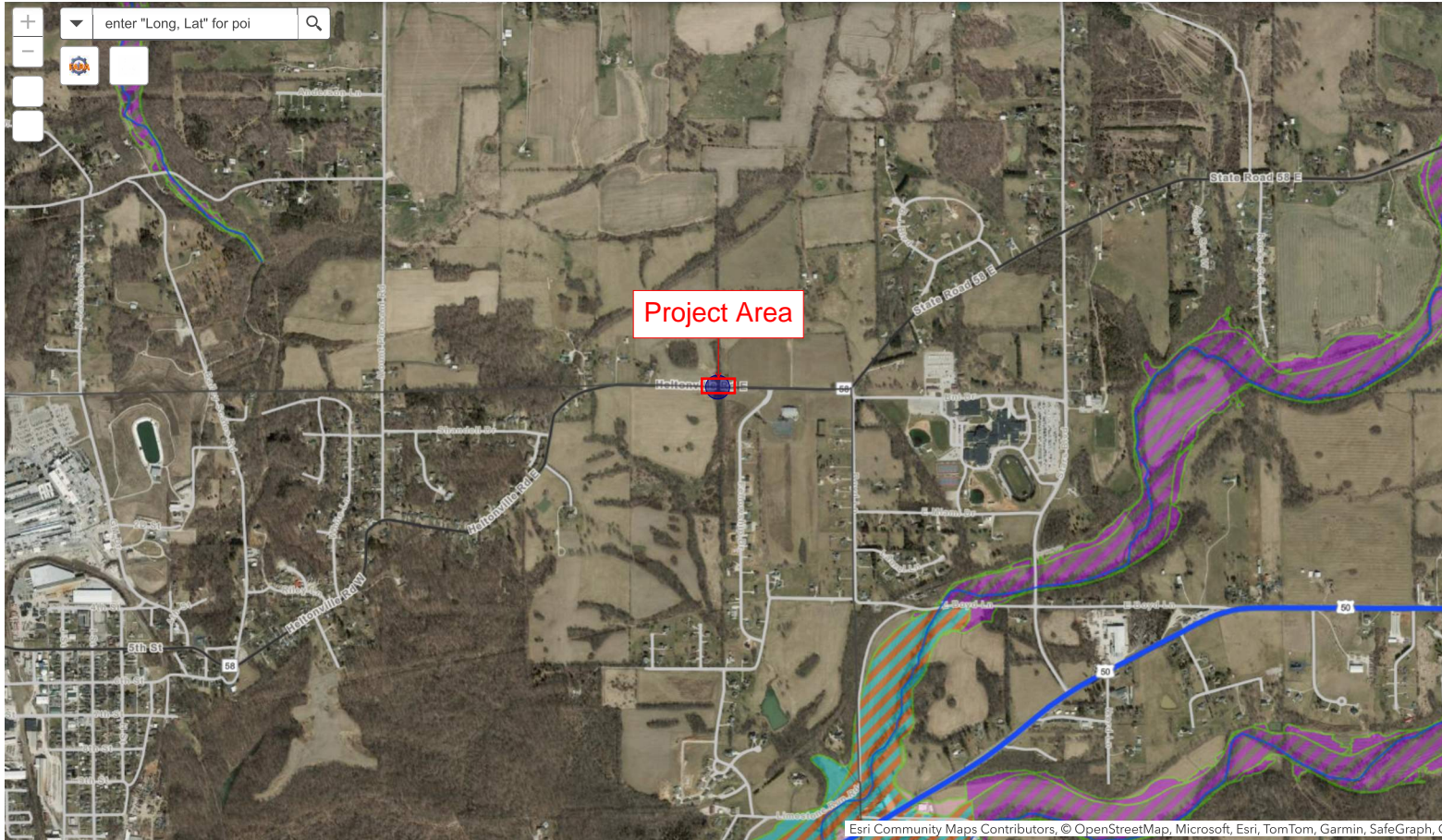


Categorical Exclusion
Appendix F
Water Resources



Legend

FLOOD_FFA_Jurisdictions (new)

Drainage Areas for Indiana NHD Flowlines

DA

- > 0 - 107,400
- 9,999 - 0

Best_Available_Flood_Hazard_Layer

Updates

FloodHazard_BestAvai_DNR_Water

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

- FEMA Zone AE Floodway; FEMA Administrative Floodway
- DNR Detailed Floodway
- DNR Approximate Floodway
- FEMA Zone A
- FEMA Zone AE
- FEMA Coastal Floodplain
- DNR Detailed Fringe
- DNR Approximate Fringe
- Additional Floodplain Area; DNR .2 Percent Flood Hazard
- FEMA Protected by Levee
- FEMA Floodplain - Ponding (Depth)
- FEMA Floodplain - Sheet Flow (Depth)
- Not Mapped

1:18056
-86.442 38.892 Degrees



Approved 9.25.2023

Waters Report

State Road 58 in Lawrence County, Indiana

Small Structure Project

Des. No. 2200992

Asset ID#: CV 058-047-81.33



Prepared For:

INDOT Vincennes District
3650 US Hwy 41
Vincennes, IN 47591

Prepared By:



Bryne Taylor
btaylor@aztec.us
AZTEC Engineering Group, Inc
642 N. Madison St.
Bloomington, IN 47404

Submittal 2
September 21, 2023

1. Project Information

Dates of Field Reconnaissance: July 5, 2023; July 7, 2023; August 17, 2023; September 19, 2023

Location: Section 7; Township: 5 North; Range: 1 East
Bartlettsville Quadrangle (1994)
Lawrence County, Indiana
Latitude: 38.883100, Longitude: -86.455700

2. Project Description

The Indiana Department of Transportation (INDOT) Vincennes District intends to proceed with a small structure project along State Route 58 (SR 58) in Lawrence County, Indiana. The proposed project is located along SR 58, approximately 3.82 miles east of SR 37 in Shawswick Township, Lawrence County, Indiana (Figure 1). The project involves improvements to the small structure, including guardrail and pavement work.

Land use within the investigated area is primarily roadway, mowed right-of-way, agricultural field edges, and wooded riparian corridor along the Unnamed Tributary (UNT) to Leatherwood Creek that flows under SR 58 through the corrugated metal pipe (CMP) (CV 058-047-81.33).

3. Desktop Reconnaissance

Prior to conducting field work, AZTEC staff reviewed the U.S. Geological Survey (USGS) topographic mapping, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map, National Hydrography Dataset (NHD), Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, LiDAR hill shading, current aerial photography, and historical aerial photography. These resources were used to identify potential wetlands and waterways within the project investigated area and establish historic conditions.

Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Lawrence County, Indiana, the project area does not contain soil areas with nationally listed hydric soils. Table 1 below shows the mapped soils within the investigated area.

Table 1 – Soil Survey Data

Soil Name	Map Abbreviation	Hydric Range	Flooding Frequency	Drainage Class	Depth to Water Table
Crider silt loam, 6 to 12 percent slopes, eroded	CspC2	Not Hydric (0%)	None	Well Drained	>200 cm

National Wetland Inventory (NWI) Information

The USFWS NWI map (Figure 6) shows no wetlands mapped within or adjacent to the investigated area. The nearest USFWS NWI mapped feature is a freshwater emergent wetland (PEM1Ch) wetland located approximately 0.07 mile northwest of the investigated area (Photo 51).

12-Digit Hydrologic Unit Code (HUC)

12-Digit Hydrologic Unit Code: 051202081001

12-Digit Hydrologic Unit Name: Headwaters Leatherwood Creek

Additional Information

A review of the USGS topographic maps (Figure 2) shows no streams (solid blue lines) within the investigated area. The NWI wetlands and NHD flowlines can be seen on aerial photography (Figure 6); there are 2 unclassified flowlines within the investigated area. The IDNR Floodplain Map and National Flood Hazard Layer FIRMette (Figures 6 and 7) show no floodplains within the investigated area; the nearest floodplain is approximately 0.68 mile southeast of the investigated area.

Attached Documents

- Figure 1. Project Location Map
- Figure 2. USGS Quadrangle / Topographic Map
- Figure 3. Aerial Photography Map
- Figure 4. Lawrence County Soil Survey Map
- Figure 5. Lawrence County Hydric Soil List and Components
- Figure 6. Floodplain, Flowline, and Wetland Map
- Figure 7. National Flood Hazard Layer FIRMette
- Figure 8. USGS StreamStats Watershed Map
- Figure 9. Feature and Photo Location Map
- Appendix A – Ground Photographs
- Appendix B – Wetland Determination Data Forms
- Appendix C – Preliminary Jurisdictional Determination Form

4. Field Reconnaissance

A field visit was conducted on July 5, 2023 and July 7, 2023, by Brynne Taylor and Mike Myers of AZTEC Engineering Group, Inc. Supplemental photos of the culvert structure, investigated area, and roadside ditches were taken during two additional site visits on August 17, 2023 and September 19, 2023 by Brynne Taylor. Local precipitation data was reviewed to provide context for observations of hydrology. Precipitation data on the Community Collaborative Rain, Hail, and Snow Network website (Cocorahs.org) showed the area received approximately 5.61 inches of precipitation in the two (2) weeks preceding the field investigation. Six significant rain events occurred on June 25, 26, 30, and July 1, 2, and 3, resulting in 0.47, 0.68, 0.67, 1.22, 1.98, and 0.55 inches of precipitation, respectively.

5. Stream Feature Discussion

All runoff from the investigated area drains into the UNT to Leatherwood Creek. The OHWM was taken at two stream assessment points (SAP) along the waterway. Table 2 is a summary of SAP data taken within the investigated area. The UNT to Leatherwood Creek drains into Leatherwood Creek, which flows generally south into the East Fork White River and eventually flows into the White River. The White River is a traditionally navigable water (TNW). Drainage is conveyed towards the UNT to Leatherwood Creek via two roadside ditches (RSD). All waterways identified onsite are shown in Figure 9 and photos are included in Appendix A.

Table 2 – Stream Assessment Points

Stream Assessment Point	Water Feature Name	Latitude / Longitude	Upstream / Downstream	OHWM
SAP1	UNT to Leatherwood Creek	38.88278/-86.45609	Downstream	8' width / 0.5' depth
SAP2	UNT to Leatherwood Creek	38.88318/-86.45578	Upstream	2' width / 0.33' depth

UNT to Leatherwood Creek

Within the investigated area, the UNT to Leatherwood Creek flows south for approximately 201 feet and drains the surrounding agricultural uplands. The UNT to Leatherwood Creek does not appear on the USGS 7.5' Bartlettsville Quadrangle (1994; Figure 2) within the investigated area. Based on field observations, the UNT to Leatherwood Creek appears to be ephemeral. The UNT to Leatherwood Creek exhibits an OHWM. The OHWM was taken at two SAP's and is summarized in Table 2. The maximum OHWM of UNT to Leatherwood Creek is 8' wide by 0.5' deep. The USGS StreamStats website shows the upstream drainage area of UNT to Leatherwood Creek as 0.052 square mile at the project location (Figure 8).

The UNT to Leatherwood Creek has a silt, cobble and gravel substrate and high riparian cover. The UNT to Leatherwood Creek has little sinuosity, lacks riffle/pool complexes and has poor water clarity within the investigated area. The quality of UNT to Leatherwood Creek is average due to little sinuosity and lack of developed riffle/pool complexes. The UNT to Leatherwood Creek drains into Leatherwood Creek, which drains into the East Fork White River, which drains into the White River, a TNW. It is anticipated that UNT to Leatherwood Creek would be considered a Water of the U.S.

The July 2023 field investigation for the SR 58 Small Structure project resulted in the evaluation of one (1) likely jurisdictional stream feature. Two (2) RSD's not exhibiting an OHWM were observed.

Table 3 – Stream Summary Table

Water Feature Name	Photos	Lat/Long	OHWM	Length within Investigated Area	USGS Blue-line? Type?	Riffles? Pools?	Quality	Substrate	Stream Type	Likely Water of U.S.?
UNT to Leatherwood Creek	34 - 44	38.883055, -86.455742	8' wide x 0.5' deep	201 linear feet	No, Ephemeral	No	Average	Silt, Cobble, Gravel	N/A	Yes

6. Wetland Feature Discussion

The July 2023 field investigation for the SR 58 Small Structure project did not identify any wetlands within the investigated area. Data points (DP) were collected within the investigated area where wetland conditions were most likely.

Data Point 1 was collected north of SR 58 and west of the UNT to Leatherwood Creek. Vegetation at DP1 was a mix of facultative upland (FACU) and facultative (FAC) species. Dominant species at DP1 included: Black walnut (*Juglans nigra* – FACU), coralberry (*Symphoricarpos orbiculatus* – FACU), hackberry (*Celtis occidentalis* – FACU), Johnson grass (*Sorghum halepense* – FACU), slippery elm (*Ulmus rubra* – FAC), and Virginia creeper (*Parthenocissus quinquefolia* – FACU). The plant community does not pass the rapid test or dominance test for hydrophytic vegetation; thus, the hydrophytic vegetation criterion is not met. Soils at DP1 did not meet any hydric soil indicators. Wetland hydrology indicators such as water marks (B1) and drift deposits (B3) were present at DP1. Only one of three wetland criteria is present at DP1; thus, DP1 is not located within a wetland.

Data Point 2 was taken north of SR 58 east of the UNT to Leatherwood Creek. Vegetation at DP2 was a mix of facultative upland (FACU), facultative (FAC), facultative wetland (FACW) and obligate (OBL) species. Dominant species at DP2 included: Emory's sedge (*Carex emoryi* – OBL), Black walnut (*Juglans nigra* – FACU), common blue violet (*Viola sororia* – FAC), hackberry (*Celtis occidentalis* – FACU), and riverbank grape (*Vitis riparia* – FACW). The plant community does not pass the rapid test or dominance test for hydrophytic vegetation; thus, the hydrophytic vegetation criterion is not met. Soils at DP2 did not meet any hydric soil indicators. Wetland hydrology indicators

such as water marks (B1) and drift deposits (B3) were present at DP2. Only one of three wetland criteria is present at DP2; thus, DP2 is not located within a wetland.

Data Point 3 was taken south of SR 58 east of the UNT to Leatherwood Creek. Vegetation at DP3 was a mix of upland (UPL), facultative upland (FACU), facultative (FAC), and facultative wetland (FACW) species. Dominant species at DP3 included: Amur honeysuckle (*Lonicera maackii* – UPL), Green ash (*Fraxinus pennsylvanica* – FACW), hackberry (*Celtis occidentalis* – FACU), poison ivy (*Toxicodendron radicans* – FAC), slippery elm (*Ulmus rubra* – FAC), and winter creeper (*Euonymus fortunei* – UPL). The plant community passes the dominance test for hydrophytic vegetation; thus, the hydrophytic vegetation criterion is met. Soils at DP3 did not meet any hydric soil indicators. No wetland hydrology indicators were present. Only one of three wetland criteria is present at DP3; thus, DP3 is not located within a wetland.

Data Point 4 was taken south of SR 58 west of the UNT to Leatherwood Creek. Vegetation at D4 was a mix of upland (UPL), facultative upland (FACU), and facultative (FAC) species. Dominant species at DP4 included: Amur honeysuckle (*Lonicera maackii* – UPL), Black walnut (*Juglans nigra* – FACU), Downy yellow violet (*Viola pubescens* – FACU), hackberry (*Celtis occidentalis* – FACU), red mulberry (*Morus rubra* – FACU), slippery elm (*Ulmus rubra* – FAC), and winter creeper (*Euonymus fortunei* – UPL). The plant community does not pass the rapid test or dominance test for hydrophytic vegetation; thus, the hydrophytic vegetation criterion is not met. DP4 did not exhibit hydric soil indicators. No wetland hydrology indicators present. No wetland criteria are present at DP4; thus, DP4 is not located within a wetland.

Table 4 is a summary of the data points collected within the investigated area.

Table 4 – Data Point Summary Table

Data Point	Latitude / Longitude	Hydrophytic Vegetation	Hydrophytic Soils	Hydrology	Wetland
DP1	38.883198, -86.455849	No	No	Yes	No
DP2	38.883258, -86.455783	No	No	Yes	No
DP3	38.882942, -86.455694	Yes	No	No	No
DP4	38.882908, -86.455839	No	No	No	No

7. Open Water Discussion

There are no open water features located in the investigated area.

8. Other Features Discussion

The July 2023 field investigation identified two RSDs, identified as RSD1 and RSD2 on the attached feature and photo location map (Figure 9). Roadside ditch 1 (RSD1) flows east along the north side of SR 58 and appears to convey drainage into the UNT to Leatherwood Creek. Roadside ditch 2 (RSD2) flows west along the north side of SR 58 and appears to convey drainage into the UNT to Leatherwood Creek. Dominant vegetation in the roadside ditches consist of upland and facultative upland species including Annual ragweed (*Ambrosia artemisiifolia*), Asiatic dayflower (*Commelina communis*), Early Wild-Rye (*Elymus macgregorii*), Giant Ragweed (*Ambrosia trifida*), Johnson Grass (*Sorghum halepense*), and Meadow fescue (*Festuca pratensis*). Both RSD1 and RSD2 are shallow, vegetated ditches with no defined bed and banks, and neither display an OHWM. These features will not likely fall under the jurisdiction of the USACE.

9. Conclusions

A survey of the investigated area for the SR 58 Small Structure project identified one stream and two roadside ditches.

The UNT to Leatherwood Creek is an ephemeral stream, which eventually drains into the White River, a TNW. It is anticipated that the UNT to Leatherwood Creek would be considered a Water of the U.S.

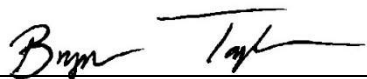
RSD1 and RSD2 appear to be manmade ditches, both lack defined bed and banks, and do not carry relatively permanent or seasonal flow. Therefore, RSD1 and RSD2 would be excluded from the definition of Waters of the U.S. as outlined in the CWA guidance following the *Rapanos v. United States* Supreme Court Decision (1986). Thus, it is our opinion that RSD1 and RSD2 are not jurisdictional.

No bat or bird use of the culvert was detected during the July 5 and July 7, 2023 field investigation or August 17, 2023 site visit. The culvert was not inspected during the September 19, 2023 site visit. No other structures are located within the investigated area.

The UNT to Leatherwood Creek is likely Waters of the U.S. and is presumed to be under the jurisdiction of both the USACE and Indiana Department of Environmental Management (IDEM). Every effort should be taken to avoid and minimize impacts to the waterway. Waterway permitting will be required if impacts occur. If stream impacts exceed 300 linear feet, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

10. Acknowledgement

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 *Corps of Engineers Wetlands Delineation Manual*, the appropriate regional supplement, the USACE *Jurisdictional Determination Form Instructional Guidebook*, and other appropriate agency guidelines.

Prepared by:  Date: 9/21/2023
Brynne Taylor
Environmental Planner
AZTEC Engineering Group, Inc.

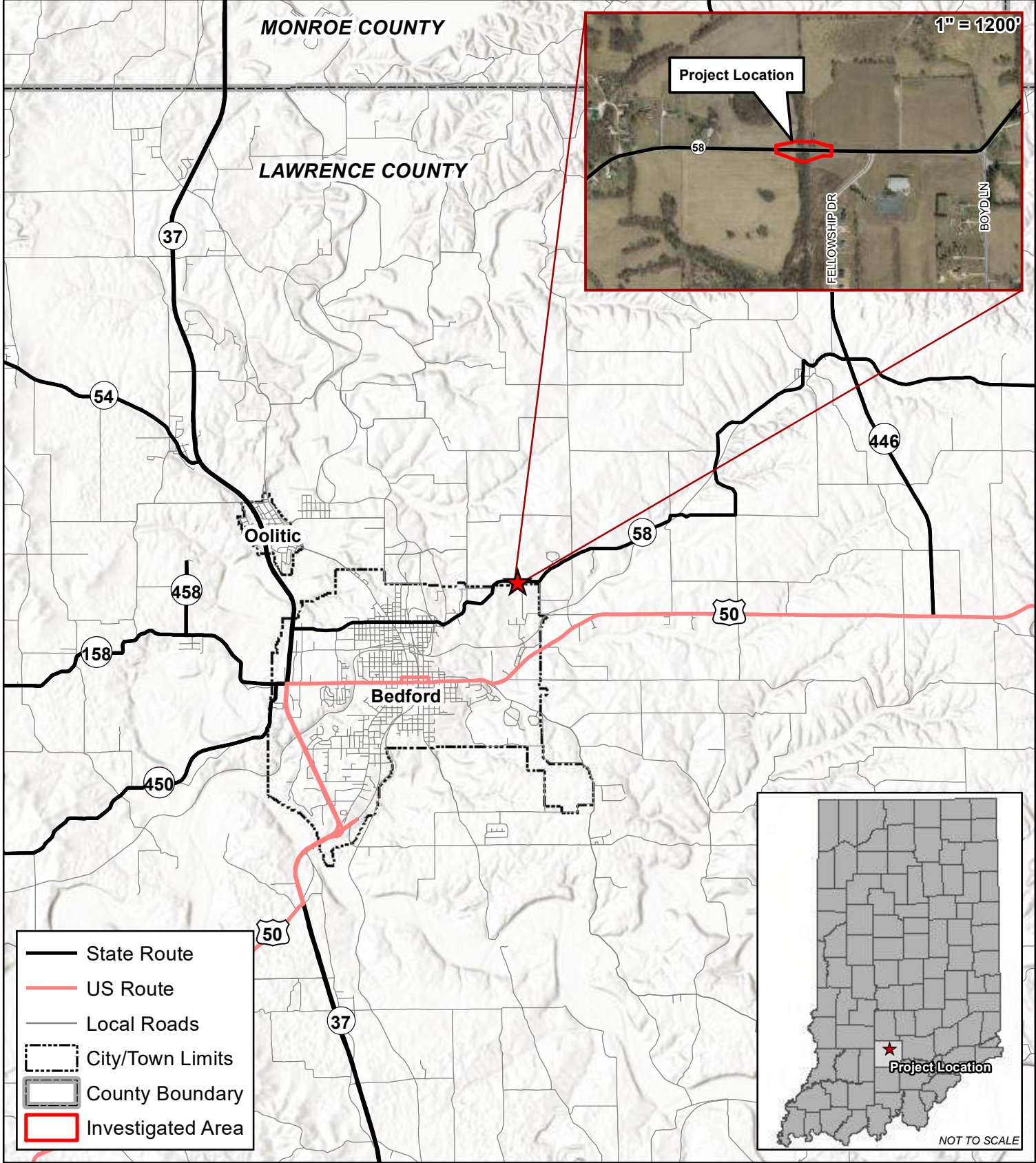
Reviewed by:  Date: 9/21/2023
Mike Myers
Project Manager, Environmental Services Division
AZTEC Engineering Group, Inc.

11. References

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Version 2.0. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). Web Soil Survey. Accessed July 2023. Available online at: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>



Sources: AZTEC (2023); ESRI World Hillshade (2020); Indiana Department of Transportation (2015); State of Indiana Best Available Othophotography (2021).

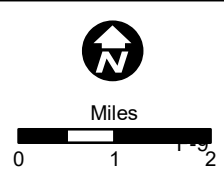
Project Location

FIGURE 1

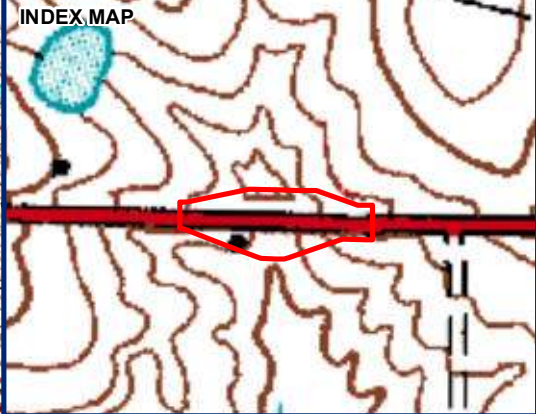


SR 58 Small Structure Project
 Des. No. 2200992
 SR 58, 3.82 miles east of SR 37
 Appendix F: Water Resources

County: Lawrence
 Township: Shawswick
 State: Indiana
 Created: 9/18/2023, B. Taylor



12-Digit HUC: 051202081001



 Investigated Area

Sources: AZTEC (2023); Indiana Department of Transportation (2015). Corresponding USGS 7.5' Quadrangle: Bartlettsville, IN (1994).

USGS Quadrangle / Topographic Map

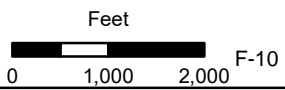
FIGURE 2

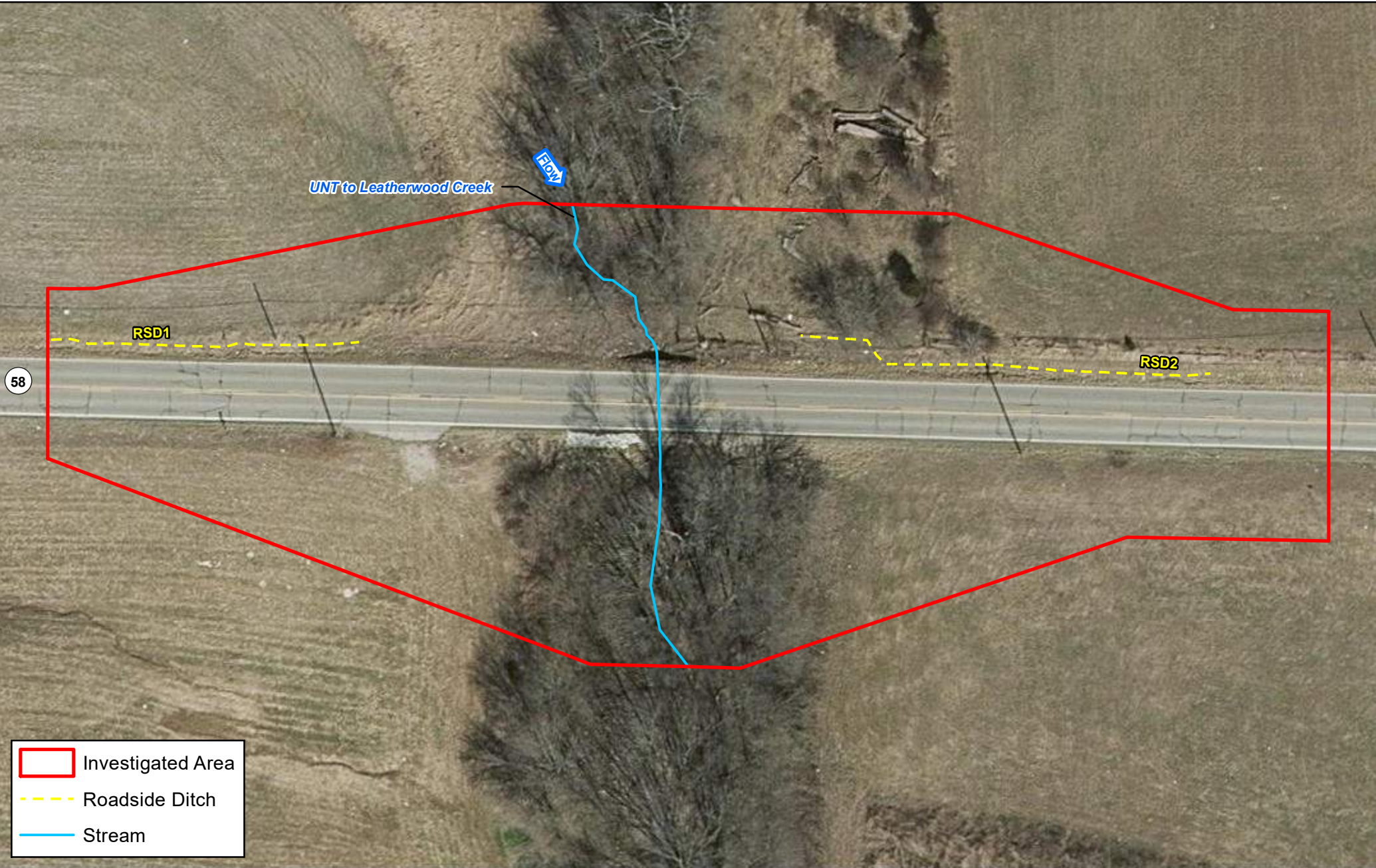


SR 58 Small Structure Project
Des. No. 2200992
SR 58, 3.82 miles east of SR 37

County: Lawrence
Township: Shawswick
State: Indiana
Created: 9/15/2023, B. Taylor

Appendix F: Water Resources





- Investigated Area
- Roadside Ditch
- Stream

Sources: AZTEC (2023); Indiana Department of Transportation (2015); State of Indiana Best Available Orthophotography (2021).

Aerial Photography Map

FIGURE 3

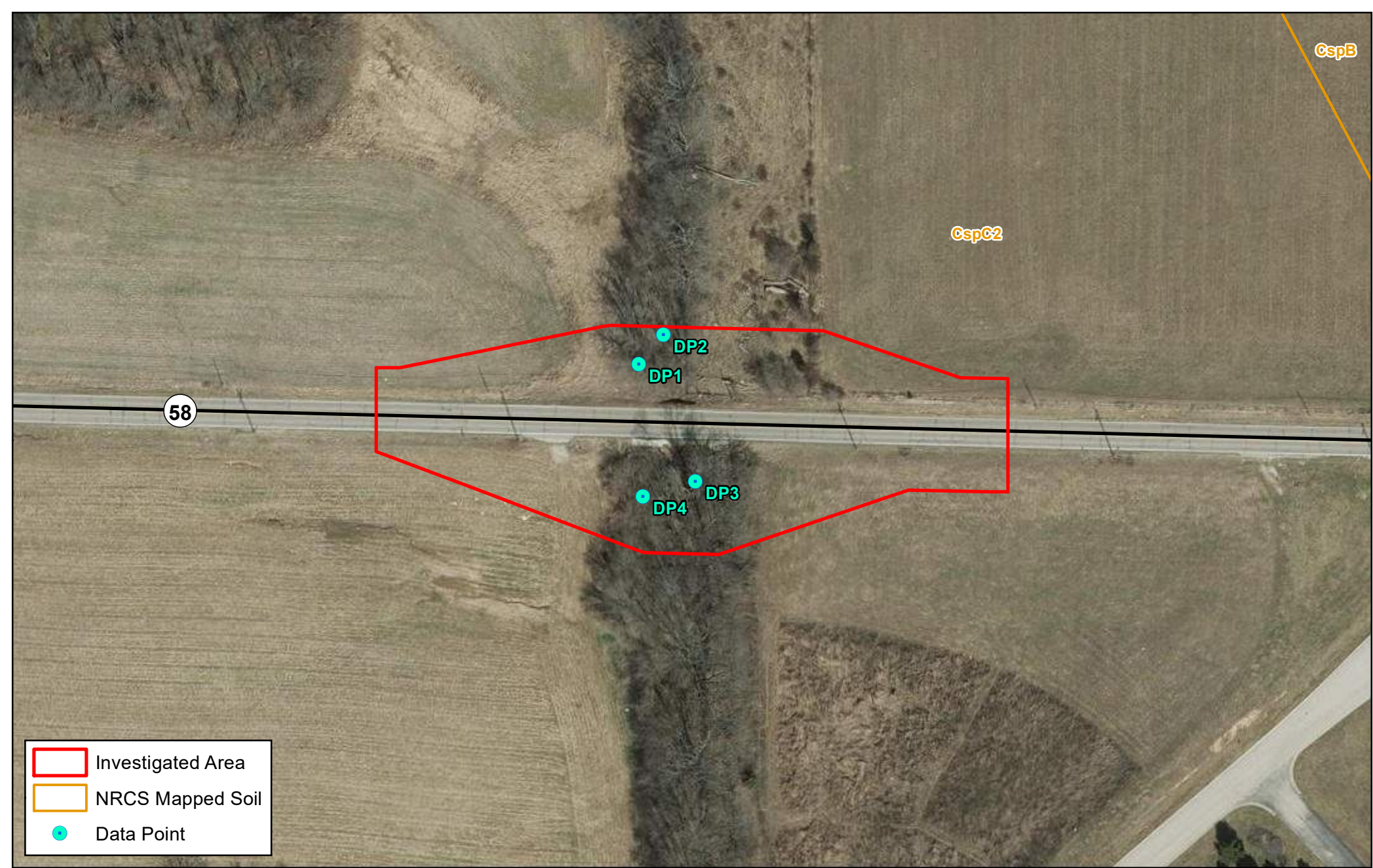
AZTEC **TYPSA**
Des. No. 2200992

SR 58 Small Structure Project
Des. No. 2200992
SR 58, 3.82 miles east of SR 37

County: Lawrence
Township: Shawswick
State: Indiana
Created: 8/23/2023, B. Taylor

Feet

 0 25 50 F-11



Sources: Indiana Department of Transportation (2015); AZTEC (2023); State of Indiana Best Available Orthophotography (2021); USDA NRCS Soil Survey Geographic Database (2015).

Lawrence County Soil Survey Map

FIGURE 4



SR 58 Small Structure Project
Des. No. 2200992
SR 58, 3.82 miles east of SR 37

Appendix F: Water Resources

County: Lawrence
Township: Shawswick
State: Indiana
Created: 9/18/2023, B. Taylor

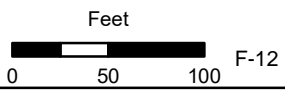
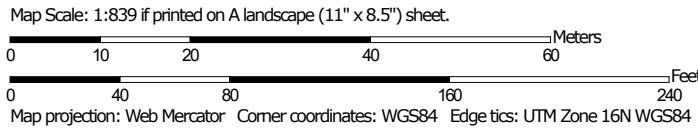


Figure 5.
Hydric Rating by Map Unit—Lawrence County, Indiana
(SR 58 Small Structure Project (Des No. 2200992))




Soil Map may not be valid at this scale.









MAP LEGEND

Area of Interest (AOI)







 Area of Interest (AOI)

Soils







Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lawrence County, Indiana
Survey Area Data: Version 28, Sep 3, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.










Date(s) aerial images were photographed: Jun 15, 2022—Jul 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CspC2	Crider silt loam, 6 to 12 percent slopes, eroded	0	1.5	100.0%
Totals for Area of Interest			1.5	100.0%



-  Investigated Area
-  NWI Wetlands
-  NHD Flowlines (Unclassified)
- NHD Flowlines (Classified)**
-  Artificial Path
-  Connector
-  Stream/River
- Best Available Flood Hazard (IDNR)**
-  DNR Approximate Floodway
-  DNR Approximate Fringe
-  FEMA Zone AE Floodway

Sources: AZTEC (2023); IDNR Best Available Flood Hazard Data (2023); Indiana Department of Transportation (2015); State of Indiana Best Available Orthophotography (2021); USGS NHD (2016).

Floodplain, Flowline, and Wetland Map

FIGURE 6



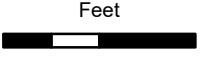
Des. No. 2200992

SR 58 Small Structure Project
 Des. No. 2200992
 SR 58, 3.82 miles east of SR 37

County: Lawrence
 Township: Shawswick
 State: Indiana
 Created: 8/21/2023, B. Taylor



Feet



0 250 500 F-16

Figure 7. DWLRQO OPRG-EPUGDHU)SUVWH



11/11/1



FHOG

1) 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

68-82	68-82	<p>LWHRW %DVHJRRG OHYDVLRLQ % -FCH\$ 9 \$</p> <p>LWK%RUH\$WK -FCH\$ 9 \$ 9 \$</p> <p>\$HODWRLU)DRRQ</p>
26-32	26-32	<p>\$DQD &DQFH)DRG-EPUG \$JHD/ R DQDQD FROFHIOFRGZWKDHUDH G\$WKOHV WKOQRQHRRW RU ZWKGLDQ DJHD/R OHV WKOQRHVXDUHEOH\$CH;</p> <p>XWUH&QGLWLRQ/\$DQD &DQFH)DRG-EPUG -FCH;</p> <p>\$JHZWK&G\$H)DRG&LNGHWR HMH GHRVHV -FCH;</p> <p>\$JHZWK)DRG&LNGHWRHMH -FCH</p>
26-36	26-36	<p>\$JHDRLQLEO)DRG-EPUG -FCH;</p> <p>(HFWLYHV</p> <p>\$JHDRLQWHUHQ)DRG-EPUG -FCH</p>
68-76	68-76	<p>--- &DQD &OYHUW RU &VRUR#ZU</p> <p> HMH LNH RU)DRRQO</p>
26-36	26-36	<p>--- &VRW)FWLRQ/ZWK\$DQD &DQFH</p> <p>--- DVHU &UIDFH OHYDVLRLQ</p> <p>--- &DQD)D ZUDQ#FW</p> <p>~ ~ ~ ~ ~ %DVHJRRG OHYDVLRLQLQ %</p> <p>--- LEW R &VXG</p> <p>--- XJLVGLFWLRQ%&DQD</p> <p>--- &DQD)D ZUDQ#FW %DQDQLQ</p> <p>--- &VRLOH%DQDQLQ</p> <p>--- &VRURD&L)F)DVXUH</p>
68-86	68-86	<p>LLWDD DWD\$DLODEOH</p> <p>RLJWDD DWD\$DLODEOH</p> <p>--- &DSSG</p>

74SLQGLVSDQHGQWKHESLV)DQD&VRURD&LW
SRLQV V)OHFWHG&VW#XJ DQGRV)GRV UH&LH
DQD&VRURD&LW)DQD)D&VRURD&LW)DQD)D&VRURD&LW

Des. No. 2200992

Des. No. 2200992; SR 58 Small Structure Project StreamStats Report (Figure 8)

Region ID: IN
Workspace ID: IN20230725154016489000
Clicked Point (Latitude, Longitude): 38.88308, -86.45563
Time: 2023-07-25 11:40:35 -0400



SR 58 Small Structure Project

[+ Collapse All](#)

Basin Characteristics

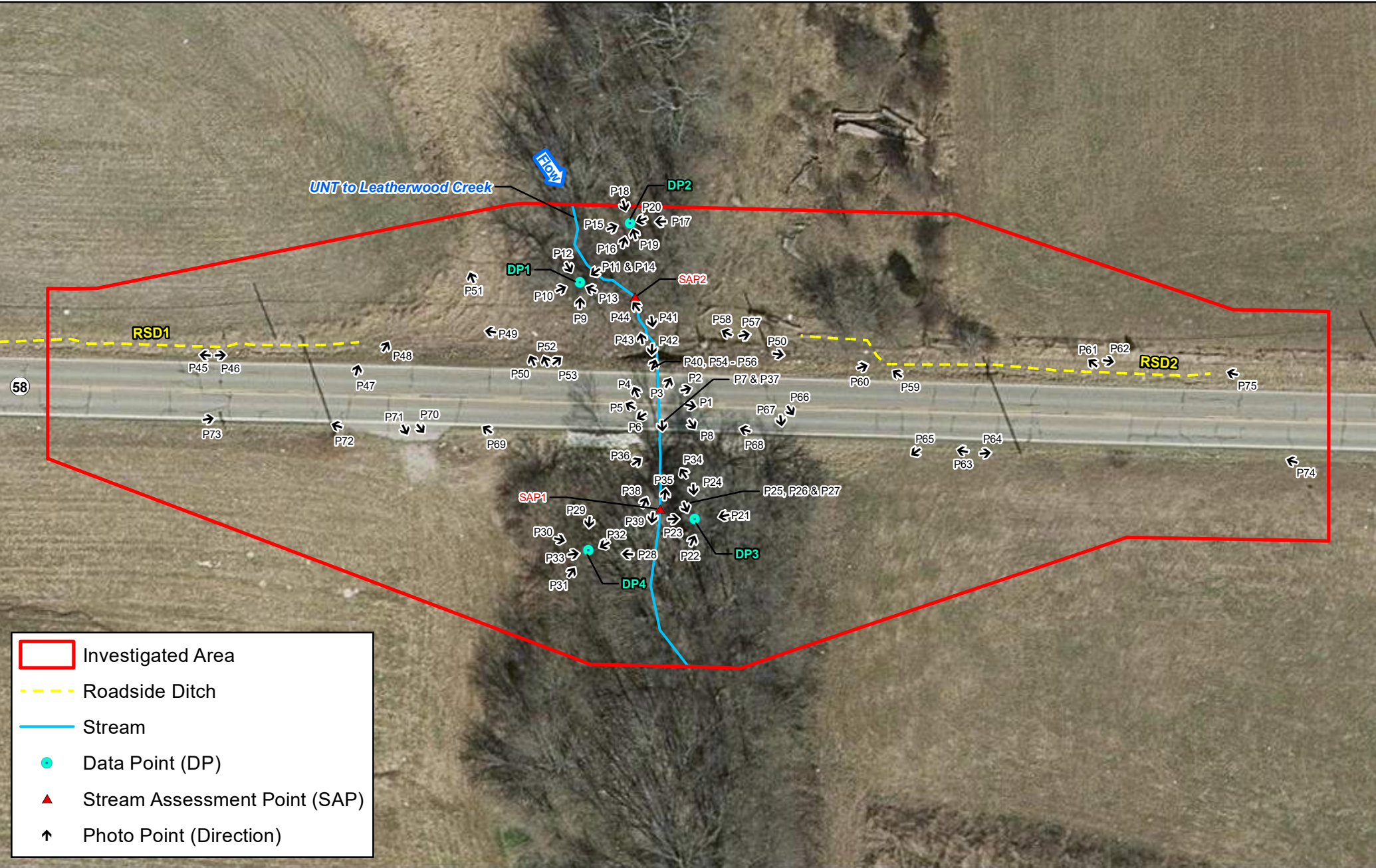
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.052	square miles

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.16.1
 StreamStats Services Version: 1.2.22
 NSS Services Version: 2.2.1



- Investigated Area
- Roadside Ditch
- Stream
- Data Point (DP)
- ▲ Stream Assessment Point (SAP)
- ↑ Photo Point (Direction)

Sources: AZTEC (2023); Indiana Department of Transportation (2015); State of Indiana Best Available Orthophotography (2021).

Feature and Photo Location Map

FIGURE 9



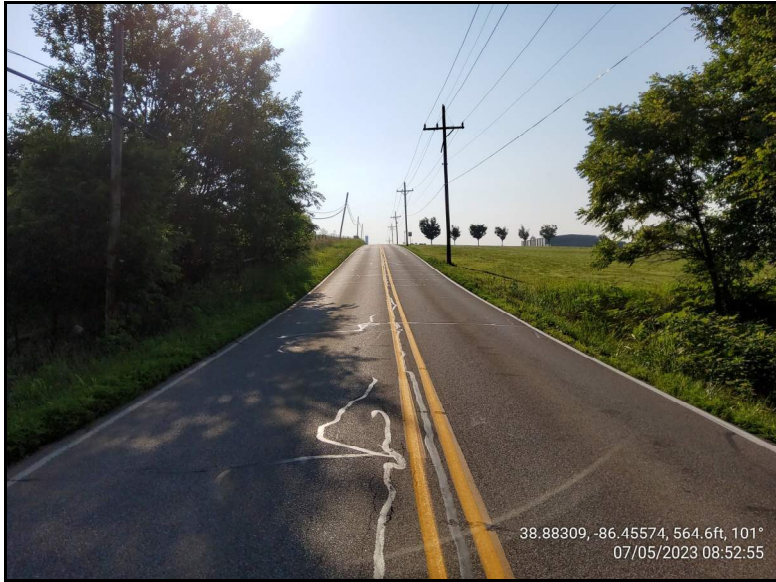
SR 58 Small Structure Project
 Des. No. 2200992
 SR 58, 3.82 miles east of SR 37

County: Lawrence
 Township: Shawswick
 State: Indiana
 Created: 8/20/2023, B. Taylor

Feet

0 25 50

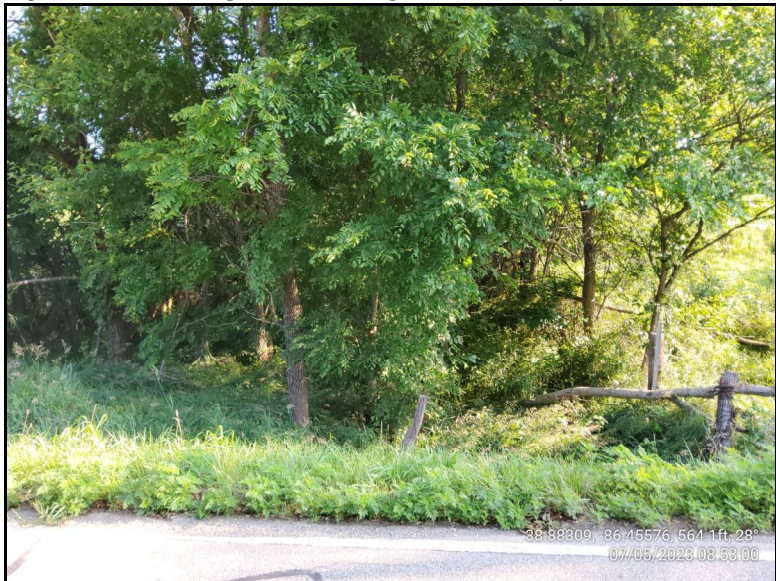
F-19



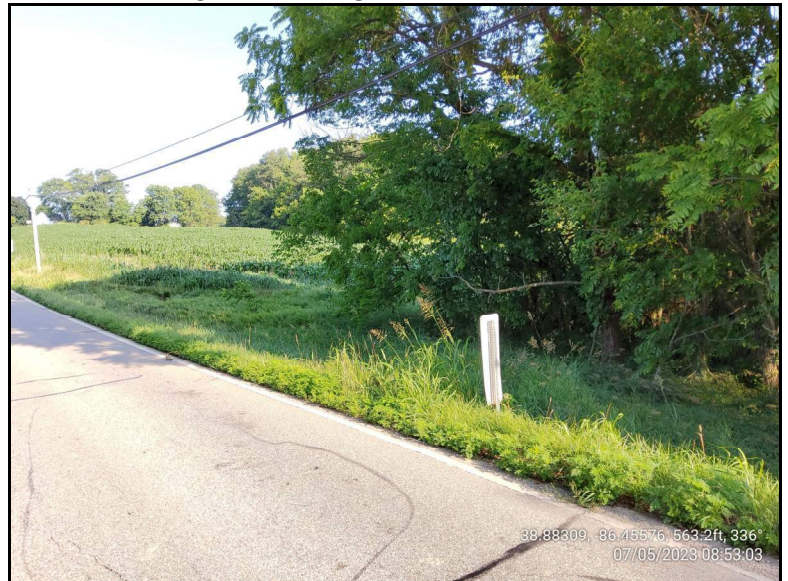
Photograph 1. Taken from State Route 58 (SR 58) at center of the investigated area, facing east showing SR 58 and adjacent land.



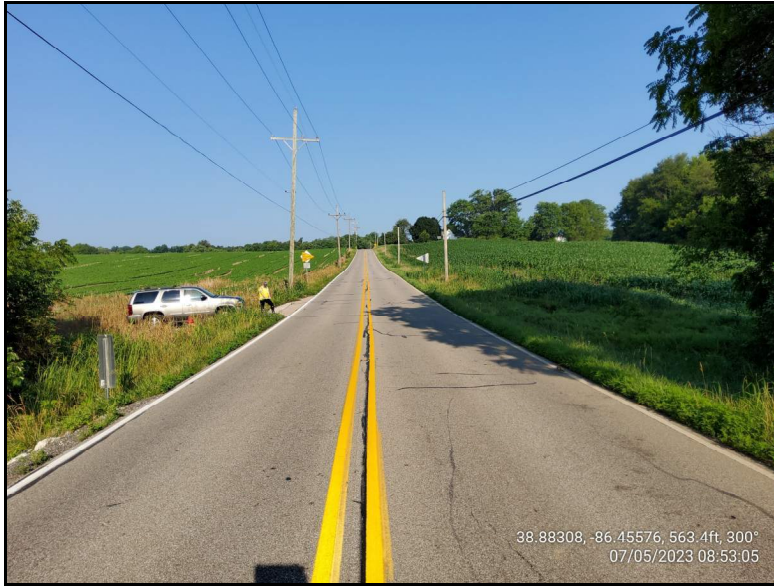
Photograph 2. Taken from SR 58 at center of the investigated area, facing east-northeast showing roadside vegetation north of SR 58.



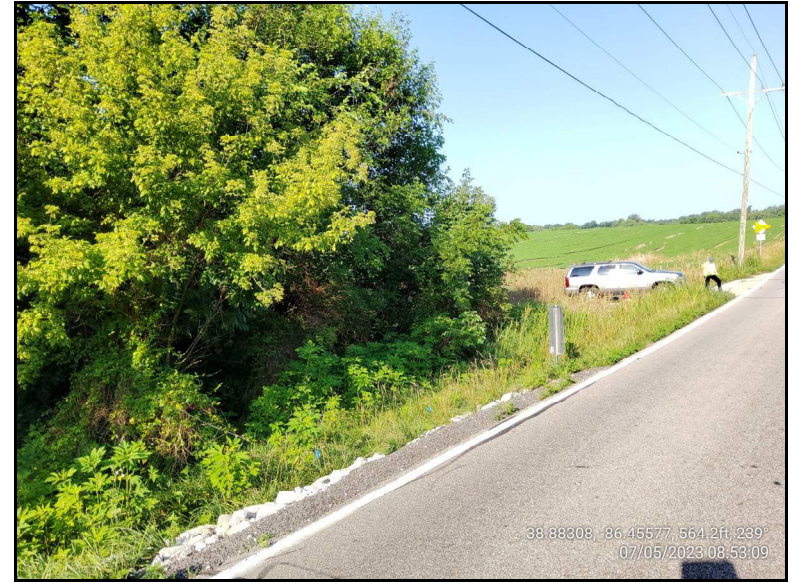
Photograph 3. Taken from SR 58 at center of the investigated area, facing northeast showing roadside vegetation north of SR 58 at the corrugated metal pipe (CMP) inlet.



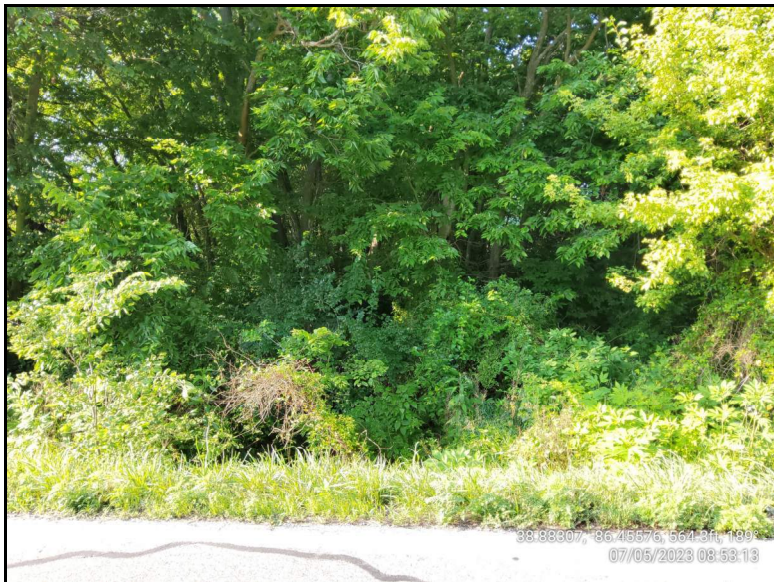
Photograph 4. Taken from SR 58 at center of the investigated area, facing northwest showing roadside vegetation north of SR 58.



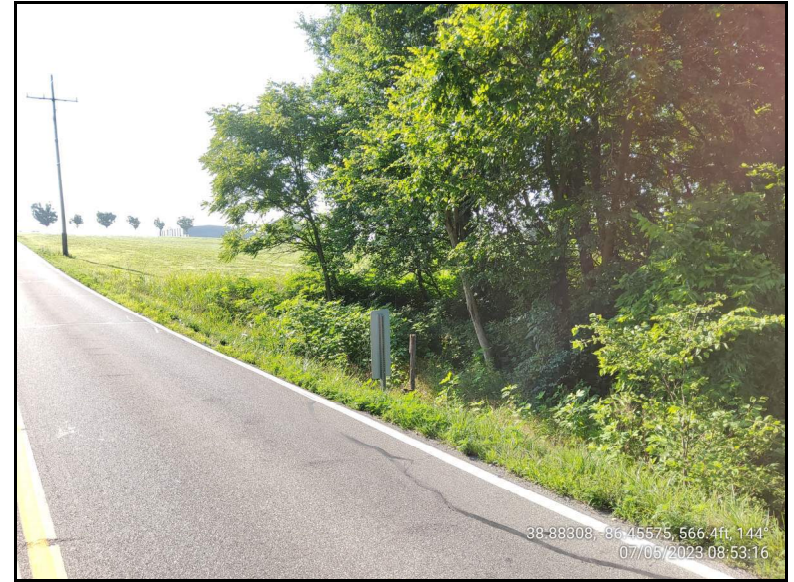
Photograph 5. Taken from SR 58 at center of the investigated area, facing west showing SR 58 and adjacent land.



Photograph 6. Taken from SR 58 at center of the investigated area, facing west-southwest showing existing roadside vegetation south of SR 58.



Photograph 7. Taken from SR 58 at center of the investigated area, facing south showing roadside vegetation south of SR 58 at CMP outlet.



Photograph 8. Taken from SR 58 at center of the investigated area, facing southeast showing roadside vegetation south of SR 58.



Photograph 9. Taken north of SR 58, facing north showing the location and surrounding plot vegetation of Data Point 1 (DP1) (shovel).



Photograph 10. Taken north of SR 58, facing east-northeast showing the location and surrounding plot vegetation of DP1 (shovel).



Photograph 11. Taken north of SR 58, facing west-southwest showing the location and surrounding plot vegetation of DP1 (shovel).



Photograph 12. Taken north of SR 58, facing south-southeast showing the location and surrounding plot vegetation of DP1 (shovel).



Photograph 13. DP1 soil pit.



Photograph 14. DP1 soil profile. Soil is non-hydric.



Photograph 15. Taken north of SR 58, facing east-northeast showing the location and surrounding plot vegetation of DP2 (shovel).



Photograph 16. Taken north of SR 58, facing north-northeast showing the location and surrounding plot vegetation of DP2 (shovel).



Photograph 17. Taken north of SR 58, facing west showing the location and surrounding plot vegetation of DP2 (shovel).



Photograph 18. Taken north of SR 58, facing south-southeast showing the location and surrounding plot vegetation of DP2 (shovel).



Photograph 19. DP2 soil pit.



Photograph 20. DP2 soil profile. Soil is non-hydric.



Photograph 21. Taken south of SR 58, facing west-southwest showing the location and surrounding plot vegetation of DP3 (shovel).



Photograph 22. Taken south of SR 58, facing north-northeast showing the location and surrounding plot vegetation of DP3 (shovel).



Photograph 23. Taken south of SR 58, facing east showing the location and surrounding plot vegetation of DP3 (shovel).



Photograph 24. Taken south side of SR 58, facing south showing the location and surrounding plot vegetation of DP3 (shovel).



Photograph 25. DP3 soil pit.



Photograph 26. DP3 soil profile. Soil is non-hydric.



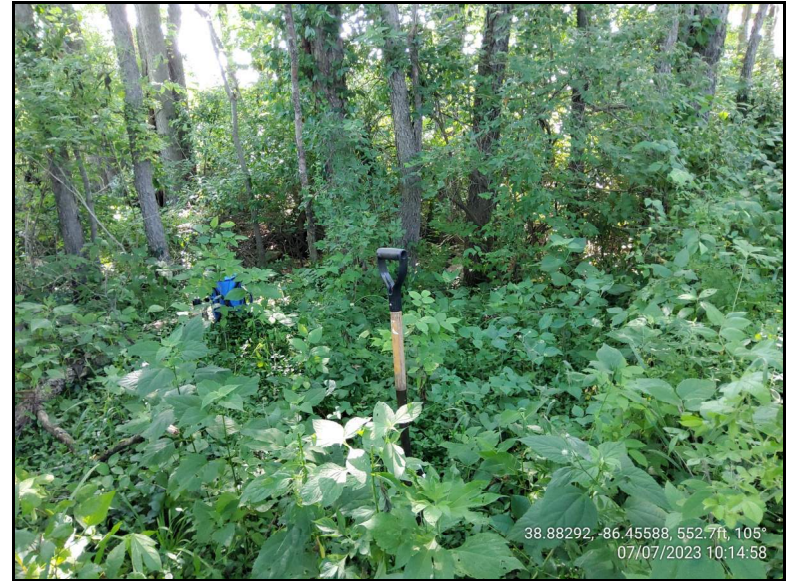
Photograph 27. DP3 soil profile. Soil is non-hydric.



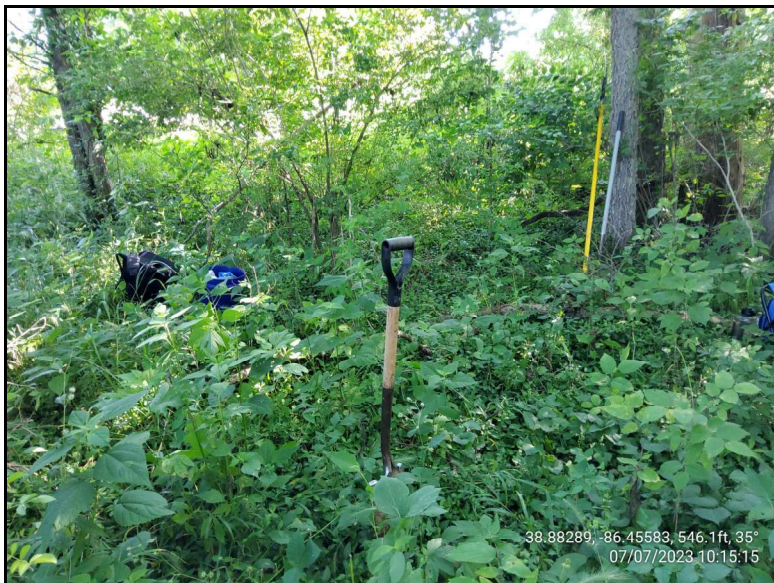
Photograph 28. Taken south of SR 58, facing west showing the location and surrounding plot vegetation of DP4 (shovel).



Photograph 29. Taken south of SR 58, facing south showing the location and surrounding plot vegetation of DP4 (shovel).



Photograph 30. Taken south of SR 58, facing east-southeast showing the location and surrounding plot vegetation of DP4 (shovel).



Photograph 31. Taken south of SR 58, facing northeast showing the location and surrounding plot vegetation of DP4 (shovel).



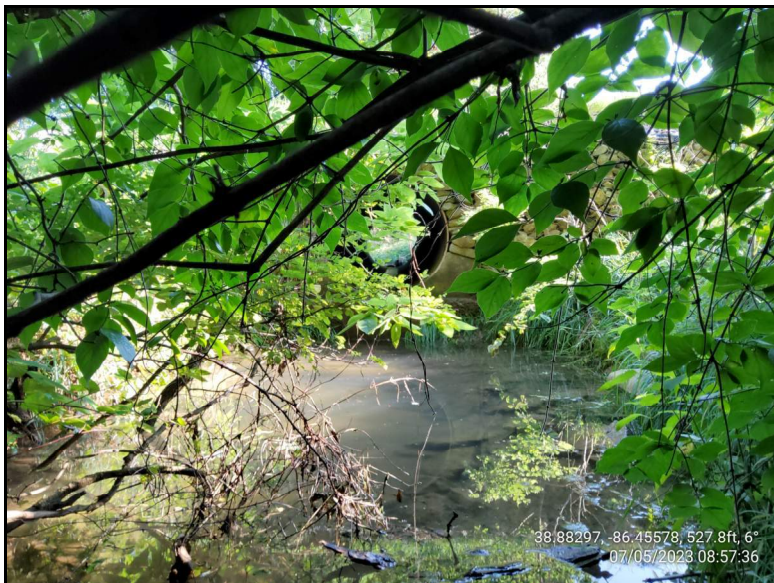
Photograph 32. DP4 soil pit.



Photograph 33. DP4 soil profile. Soil is non-hydric.



Photograph 34. Taken south of SR 58, facing northwest (upstream) in UNT to Leatherwood Creek showing the CMP outlet.



Photograph 35. Taken south of SR 58, facing north (upstream) in UNT to Leatherwood Creek showing the CMP outlet.



Photograph 36. Taken south of SR 58, facing northeast (upstream) in UNT to Leatherwood Creek showing the CMP outlet.



Photograph 37. Taken from SR 58, facing south (downstream) showing the CMP outlet.



Photograph 38. Taken south of SR 58, facing north-northeast (upstream) in UNT to Leatherwood Creek. White line indicates the OHWM.



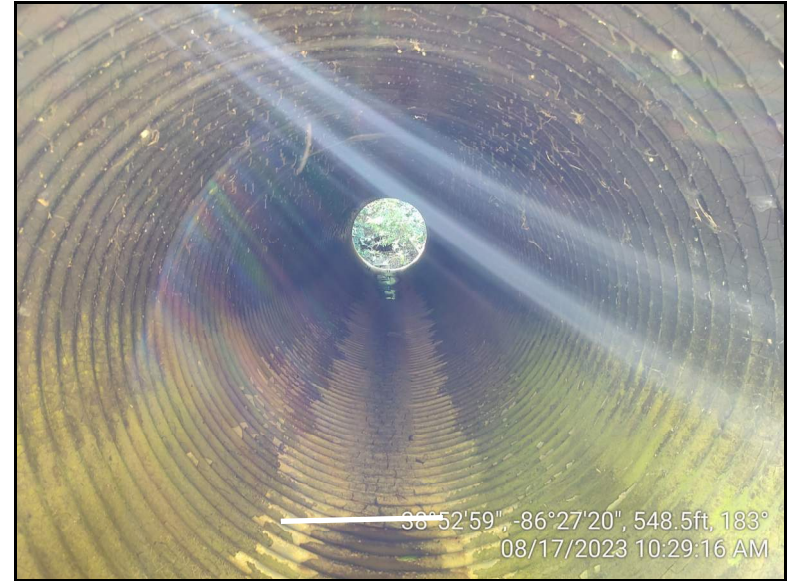
Photograph 39. Taken south of SR 58, facing south (downstream) in UNT to Leatherwood Creek (red arrow).



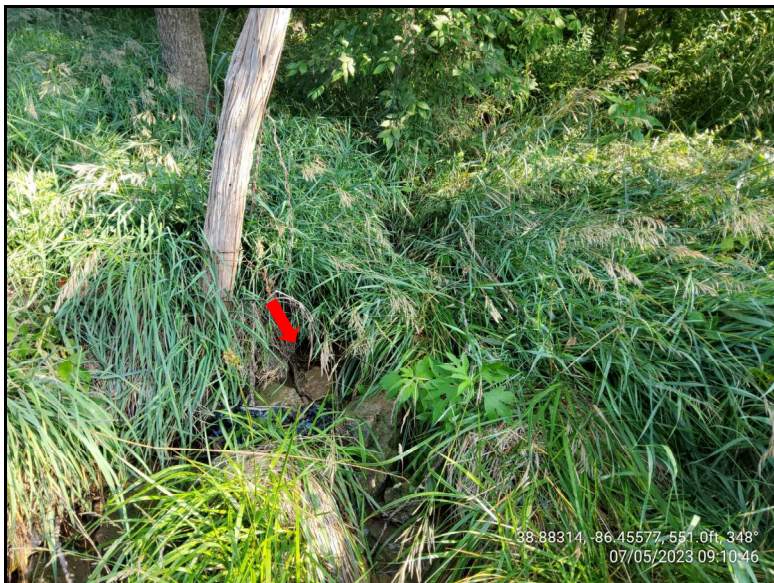
Photograph 40. Taken from SR 58, facing north (upstream) showing the CMP inlet and UNT to Leatherwood Creek (red arrow).



Photograph 41. Taken north of SR 58, facing south showing the CMP inlet and UNT to Leatherwood Creek (red arrow).



Photograph 42. Taken north of SR 58, facing south through the CMP. No sign of bat use (e.g., individuals, urine staining, or guano) or bird nests present within the CMP.



Photograph 43. Taken north of SR 58, facing north (upstream) in UNT to Leatherwood Creek (red arrow).



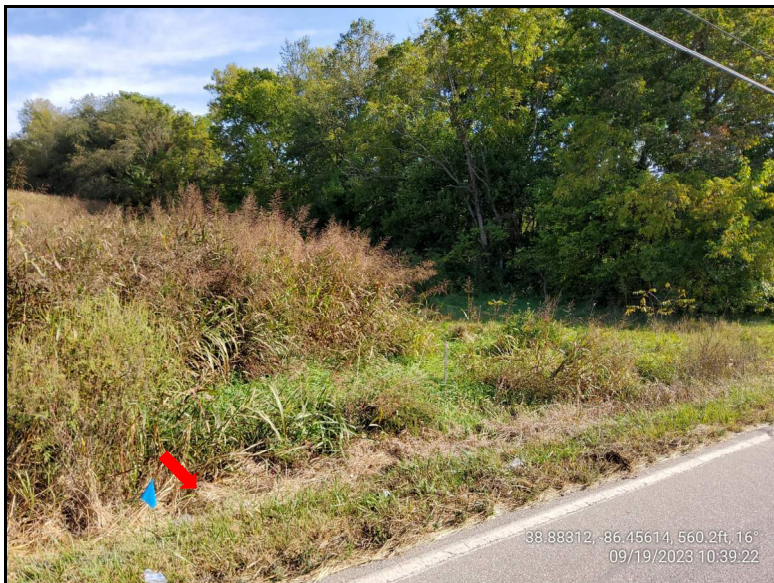
Photograph 44. Taken north of SR 58, facing northwest (upstream) in UNT to Leatherwood Creek. White line indicates the OHWM.



Photograph 45. Taken from SR 58 at the west end of the investigation area, facing west showing Roadside Ditch (RSD) 1 (red arrow) and roadside vegetation.



Photograph 46. Taken from SR 58 at the west end of the investigation area, facing east showing RSD 1 (red arrow).



Photograph 47. Taken from SR 58 at the west end of the investigation area, facing northeast showing RSD 1 (red arrow) and roadside vegetation.



Photograph 48. Taken from SR 58 at the west end of the investigation area, facing north-northeast showing roadside vegetation and forested area.



Photograph 49. Taken north of SR 58 at the west end of the investigation area, facing west showing vegetation.



Photograph 50. Taken north of SR 58 west of the CMP, facing north-northwest showing RSD 1 (red arrow) and vegetation.



Photograph 51. Taken north of SR 58 at the west end of the investigation area, facing north-northwest showing forested wetland area (red arrow) outside of investigated area.



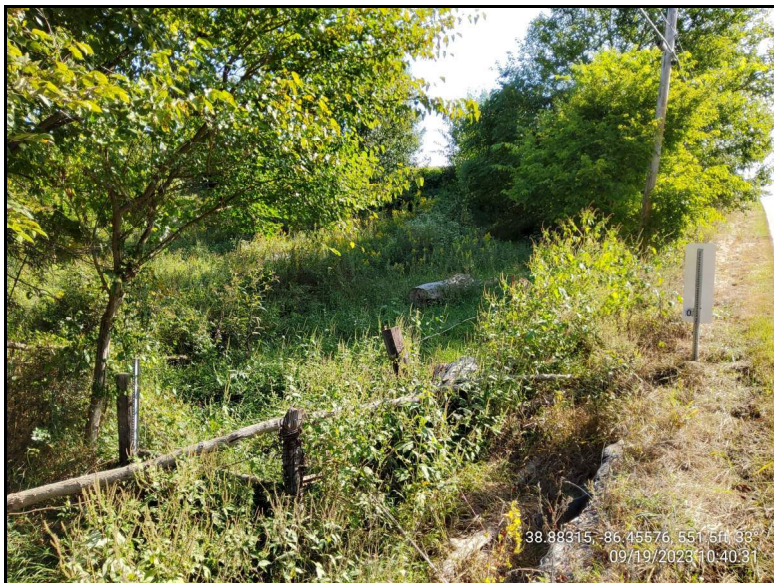
Photograph 52. Taken from SR 58 west of the CMP, facing northwest showing vegetation and forested area north of SR 58.



Photograph 53. Taken from SR 58 west of the CMP, facing northeast showing roadside vegetation and forested area north of CMP inlet. Red arrow indicates CMP.



Photograph 54. Taken from SR 58 at the center of the investigation area, facing northwest showing RSD 1 (red arrow) and roadside vegetation.



Photograph 55. Taken from SR 58 at the center of the investigation area, facing northeast showing vegetation.



Photograph 56. Taken from SR 58 at the center of the investigation area, facing northeast showing vegetation north of CMP inlet.



Photograph 57. Taken north of SR 58 east of the CMP, facing east showing RSD 2 (red arrow).



Photograph 58. Taken north of SR 58 east of the CMP, facing northwest showing vegetation west of RSD 2 and forested area north of CMP inlet.



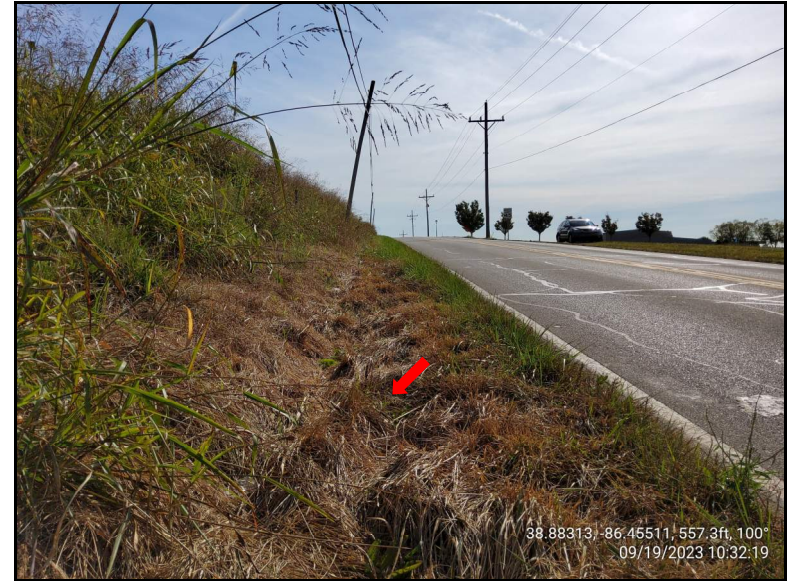
Photograph 59. Taken north of SR 58 at the east end of the investigation area, facing northwest showing RSD 2 (red arrow).



Photograph 60. Taken north of SR 58 at the east end of the investigation area, facing east-northeast showing RSD 2 (red arrow).



Photograph 61. Taken north of SR 58 in RSD 2, at the east end of the investigation area, facing northwest showing RSD 2 (red arrow) and roadside vegetation.



Photograph 62. Taken north of SR 58 in RSD 2, at the east end of the investigation area, facing east showing RSD 2 (red arrow).



Photograph 63. Taken south of SR 58 at the east end of the investigation area, facing west showing roadside vegetation.



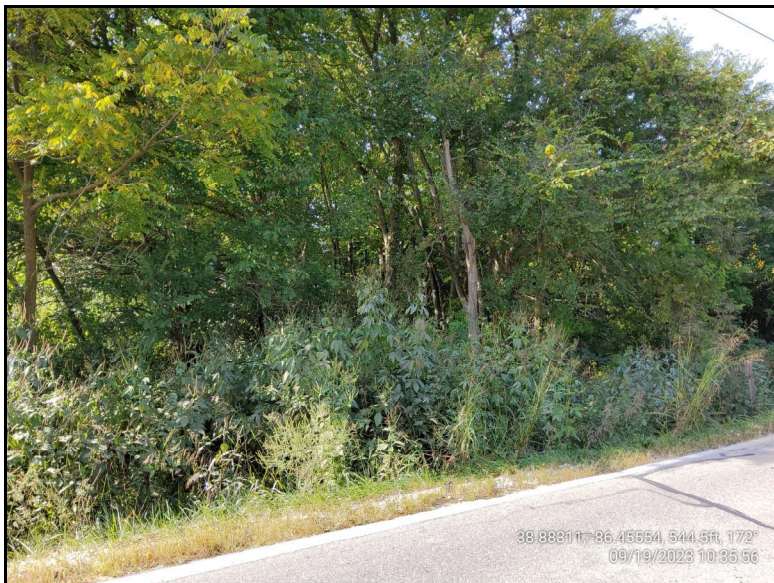
Photograph 64. Taken south of SR 58 at the east end of the investigation area, facing east showing roadside vegetation.



Photograph 65. Taken south of SR 58 at the east end of the investigation area, facing southwest showing vegetation.



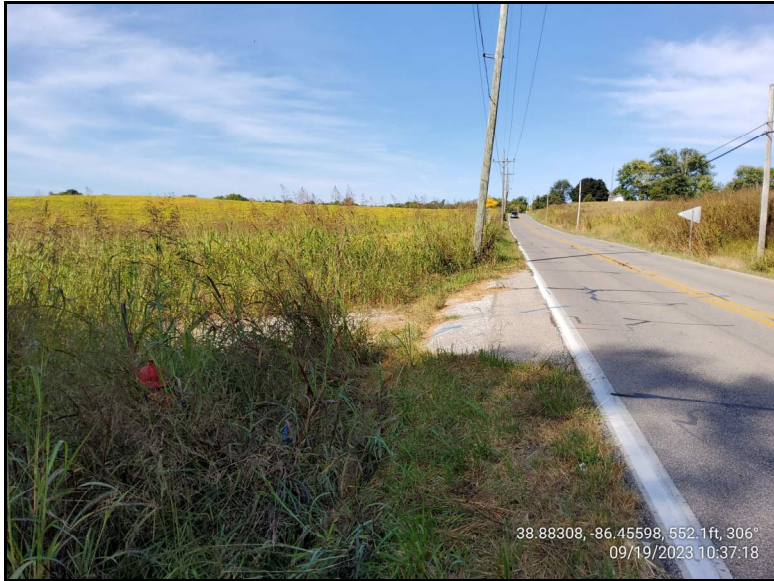
Photograph 66. Taken from SR 58 east of the CMP, facing southeast showing roadside vegetation south of SR 58.



Photograph 67. Taken from SR 58 east of the CMP, facing south showing vegetation and forested area south of SR 58 near CMP outlet.



Photograph 68. Taken from SR 58 east of the CMP, facing west showing roadside vegetation south of SR 58. Red arrow indicates CMP.



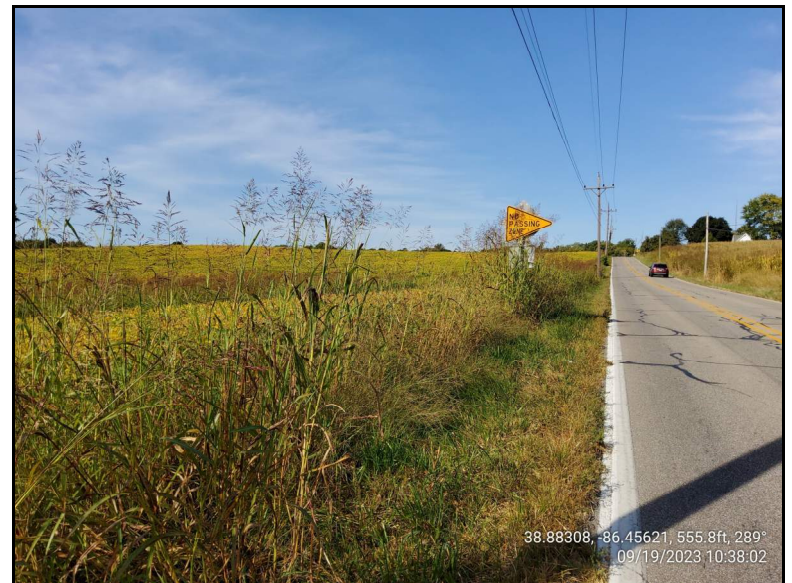
Photograph 69. Taken south of SR 58 west of the CMP, facing west showing roadside vegetation and adjacent land.



Photograph 70. Taken south of SR 58 west of the CMP, facing southeast showing vegetation and forested area. Red arrow indicates CMP.



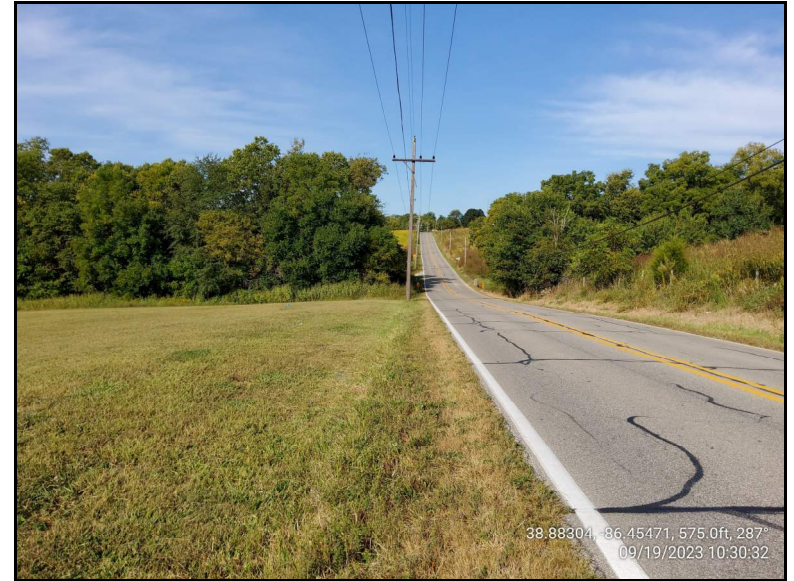
Photograph 71. Taken south of SR 58 west of the CMP, facing southeast showing vegetation and adjacent land.



Photograph 72. Taken from SR 58 at the west end of the investigation area, facing west showing roadside vegetation.



Photograph 73. Taken south of SR 58 at west end of the investigation area, facing east showing roadside vegetation.



Photograph 74. Taken south of SR 58 at the east end of the investigation area, facing west showing vegetation and adjacent land.



Photograph 75. Taken north of SR 58 at the east end of the investigation area, facing west showing vegetation and adjacent land. Red arrow indicates RSD 2.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SR 58 Small Structure City/County: Bedford/Lawrence Sampling Date: 2023-07-05
 Applicant/Owner: INDOT State: Indiana Sampling Point: DP1
 Investigator(s): Brynne Taylor, Mike Myers Section, Township, Range: Sec 7, T5N, R1E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR Lat: 38.883198 Long: -86.455849 Datum: WGS 84
 Soil Map Unit Name: Crider silt loam (CspC2) NWI classification: Non-wetland

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

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

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

HYDROLOGY

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

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

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

Remarks:

Water marks and drift deposits in project area due to 1 - 2" rain events on July 1 and July 2, 2023.

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

Sampling Point: DP1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Juglans nigra</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Celtis occidentalis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Ulmus rubra</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
	<u>100</u> = Total Cover			
	50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Sapling Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Ulmus rubra</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Celtis occidentalis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
4. _____				
5. _____				
6. _____				
	<u>16</u> = Total Cover			
	50% of total cover: <u>8</u>		20% of total cover: <u>3.2</u>	
Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Symphoricarpos orbiculatus</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lonicera maackii</u>	<u>5</u>	<u>Y</u>	<u>UPL</u>	
3. _____				
4. _____				
5. _____				
6. _____				
	<u>20</u> = Total Cover			
	50% of total cover: <u>10</u>		20% of total cover: <u>4</u>	
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Symphoricarpos orbiculatus</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Sorghum halepense</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Symphoricarpos albus</u>	<u>20</u>	<u>N</u>	<u>FACU</u>	
4. <u>Carex emoryi</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
5. <u>Geum canadense</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. <u>Ambrosia trifida</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
7. <u>Boehmeria cylindrica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8. <u>Parthenocissus quinquefolia</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
9. _____				
10. _____				
11. _____				
	<u>146</u> = Total Cover			
	50% of total cover: <u>73</u>		20% of total cover: <u>29.2</u>	
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
	<u>5</u> = Total Cover			
	50% of total cover: <u>2.5</u>		20% of total cover: <u>1</u>	
Dominance Test worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC:				<u>1</u> (A)
Total Number of Dominant Species Across All Strata:				<u>9</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:				<u>11.11</u> (A/B)
Prevalence Index worksheet:				
Total % Cover of:		Multiply by:		
OBL species	<u>15</u>	x 1 =	<u>15</u>	
FACW species	<u>5</u>	x 2 =	<u>12</u>	
FAC species	<u>25</u>	x 3 =	<u>75</u>	
FACU species	<u>231</u>	x 4 =	<u>924</u>	
UPL species	<u>1</u>	x 5 =	<u>5</u>	
Column Totals:	<u>282</u>	(A)	<u>1051</u>	(B)
Prevalence Index = B/A = <u>3.73</u>				
Hydrophytic Vegetation Indicators:				
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation				
<input type="checkbox"/> 2 - Dominance Test is >50%				
<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹				
<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Five Vegetation Strata:				
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).				
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.				
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.				
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.				
Woody vine – All woody vines, regardless of height.				
Hydrophytic Vegetation Present?				
Yes		<input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1-5	10YR 3/2	100					Silt Loam	
6-14	10YR 4/3	70	10YR 4/4	30	C	M	Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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 No

Remarks: Lots of roots in soil

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SR 58 Small Structure City/County: Bedford/Lawrence Sampling Date: 2023-07-05
 Applicant/Owner: INDOT State: Indiana Sampling Point: DP2
 Investigator(s): Brynne Taylor, Mike Myers Section, Township, Range: Sec 7, T5N, R1E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR Lat: 38.883258 Long: -86.455783 Datum: WGS 84
 Soil Map Unit Name: Crider silt loam (CspC2) NWI classification: Non-wetland

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

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

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

HYDROLOGY

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

Remarks:
 Water marks and drift deposits in project area due to 1 - 2" rain events on July 1 and July 2, 2023.

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

Sampling Point: DP2

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Celtis occidentalis</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Juglans nigra</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Ulmus rubra</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
	<u>105</u> = Total Cover			
	50% of total cover: <u>52.5</u>		20% of total cover: <u>21</u>	
Sapling Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Celtis occidentalis</u>	<u>2</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>1</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
	<u>3</u> = Total Cover			
	50% of total cover: <u>1.5</u>		20% of total cover: <u>0.6</u>	
Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
	_____ = Total Cover			
	50% of total cover: _____		20% of total cover: _____	
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Viola sororia</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Carex emoryi</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Symphotrichum lateriflorum</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
4. <u>Ambrosia trifida</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
5. <u>Teucrium canadense</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. <u>Rubus occidentalis</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
7. <u>Rosa multiflora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8. <u>Elymus macgregorii</u>	<u>4</u>	<u>N</u>	<u>FACU</u>	
9. <u>Symphoricarpos orbiculatus</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
10. <u>Lonicera japonica</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
11. _____	_____	_____	_____	
	<u>143</u> = Total Cover			
	50% of total cover: <u>71.5</u>		20% of total cover: <u>28.6</u>	
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Vitis riparia</u>	<u>2</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Parthenocissus quinquefolia</u>	<u>1</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>3</u> = Total Cover			
	50% of total cover: <u>1.5</u>		20% of total cover: <u>0.6</u>	
Remarks: (Include photo numbers here or on a separate sheet.)				

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>40</u>	x 1 = <u>40</u>
FACW species <u>38</u>	x 2 = <u>76</u>
FAC species <u>65</u>	x 3 = <u>195</u>
FACU species <u>106</u>	x 4 = <u>424</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>254</u> (A)	<u>760</u> (B)

Prevalence Index = B/A = 2.99

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1-5	10YR 4/2	100					Silt Loam	
6-18	10YR 4/2	60	10YR 4/4	40	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)		

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 No

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SR 58 Small Structure City/County: Bedford/Lawrence Sampling Date: 2023-07-07
 Applicant/Owner: INDOT State: Indiana Sampling Point: DP3
 Investigator(s): Brynne Taylor, Mike Myers Section, Township, Range: Sec 7, T5N, R1E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR Lat: 38.882942 Long: -86.455694 Datum: WGS 84
 Soil Map Unit Name: Crider silt loam (CspC2) NWI classification: Non-wetland

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> True Aquatic Plants (B14)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Aquatic Fauna (B13)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td style="border: none;"><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Remarks:

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

Sampling Point: DP3

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Celtis occidentalis</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Ulmus rubra</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
4. <u>Juglans nigra</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. _____				
6. _____				
	<u>110</u>	= Total Cover		
	50% of total cover: <u>55</u>	20% of total cover: <u>22</u>		
Sapling Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
	<u>30</u>	= Total Cover		
	50% of total cover: <u>15</u>	20% of total cover: <u>6</u>		
Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Lonicera maackii</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Ulmus rubra</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
	<u>20</u>	= Total Cover		
	50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Euonymus fortunei</u>	<u>90</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Boehmeria cylindrica</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
3. <u>Symphoricarpos orbiculatus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
4. <u>Rosa multiflora</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Toxicodendron radicans</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. <u>Phytolacca americana</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
7. <u>Geum canadense</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
8. <u>Parthenocissus quinquefolia</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
9. _____				
10. _____				
11. _____				
	<u>145</u>	= Total Cover		
	50% of total cover: <u>72.5</u>	20% of total cover: <u>29</u>		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Toxicodendron radicans</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
	<u>5</u>	= Total Cover		
	50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>		
Hydrophytic Vegetation Indicators:				
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation				
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%				
<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹				
<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Five Vegetation Strata:				
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).				
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.				
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.				
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.				
Woody vine – All woody vines, regardless of height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DP3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-19	10YR 4/3	100					Clay Loam	No redox features

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	

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 No

Remarks: Lots of roots in soil

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SR 58 Small Structure City/County: Bedford/Lawrence Sampling Date: 2023-07-07
 Applicant/Owner: INDOT State: Indiana Sampling Point: DP4
 Investigator(s): Brynne Taylor, Mike Myers Section, Township, Range: Sec 7, T5N, R1E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR Lat: 38.882908 Long: -86.455839 Datum: WGS 84
 Soil Map Unit Name: Crider silt loam (CspC2) NWI classification: Non-wetland

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> True Aquatic Plants (B14)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Aquatic Fauna (B13)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td style="border: none;"><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
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<input type="checkbox"/> FAC-Neutral Test (D5)																																			

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

Remarks:

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

Sampling Point: DP4

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Celtis occidentalis</u>	40	Y	FACU	
2. <u>Ulmus rubra</u>	40	Y	FAC	
3. <u>Fraxinus pennsylvanica</u>	10	N	FACW	
4. <u>Morus rubra</u>	10	N	FACU	
5. _____				
6. _____				
	100 = Total Cover			
	50% of total cover: <u>50</u>		20% of total cover: <u>20</u>	
Sapling Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Morus rubra</u>	20	Y	FACU	
2. <u>Juglans nigra</u>	10	Y	FACU	
3. <u>Ulmus rubra</u>	10	Y	FAC	
4. _____				
5. _____				
6. _____				
	40 = Total Cover			
	50% of total cover: <u>20</u>		20% of total cover: <u>8</u>	
Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Lonicera maackii</u>	20	Y	UPL	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
	20 = Total Cover			
	50% of total cover: <u>10</u>		20% of total cover: <u>4</u>	
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Euonymus fortunei</u>	90	Y	UPL	
2. <u>Viola pubescens</u>	30	Y	FACU	
3. <u>Boehmeria cylindrica</u>	20	N	FACW	
4. <u>Toxicodendron radicans</u>	15	N	FAC	
5. <u>Rosa multiflora</u>	10	N	FACU	
6. <u>Ulmus rubra</u>	5	N	FAC	
7. <u>Sanicula canadensis</u>	5	N	UPL	
8. <u>Lonicera maackii</u>	5	N	UPL	
9. <u>Geum canadense</u>	5	N	FACU	
10. <u>Ambrosia trifida</u>	5	N	FAC	
11. <u>Symphotrichum lateriflorum</u>	5	N	FACW	
	195 = Total Cover			
	50% of total cover: <u>97.5</u>		20% of total cover: <u>39</u>	
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
	_____ = Total Cover			
	50% of total cover: _____		20% of total cover: _____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>125</u>	x 4 = <u>500</u>
UPL species <u>120</u>	x 5 = <u>600</u>
Column Totals: <u>355</u> (A)	<u>1395</u> (B)

Prevalence Index = B/A = 3.93

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

SOIL

Sampling Point: DP4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/3	100					Sandy Loam	No redox features

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

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	

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 No

Remarks: Lots of roots in soil

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: September 21, 2023

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Brynne Taylor
 AZTEC Engineering Group, Inc
 642 N. Madison St.
 Bloomington, IN 47404

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
 (USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)**

Des. No. 2200992: The project is located along SR 58, approximately 3.82 miles east of SR 37 in Shawswick Township, Lawrence County, Indiana. The project involves improvements to the existing small structure (culvert), scour protection, installing new guardrail and roadway shoulders, and pavement patching, milling, and overlay work.

State: Indiana County/parish/borough: Lawrence City: Bedford

Center coordinates of site (lat/long in degree decimal format):

Latitude: 38.883100 Longitude: -86.455700

Universal Transverse Mercator: 16S 547209.50E 4303944.96N

Name of nearest waterbody: UNT to Leatherwood Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
UNT to Leatherwood Creek	38.883055	-86.455742	201 linear feet	Non-wetland waters	Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "*may be*" waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:


- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
 - Map: *Project Location Map; USGS Quadrangle / Topographic Map; Aerial Photography Map; Lawrence County Soil Survey Map; Floodplain, Flowline, and Wetland Map*
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale:

- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data. *Floodplain, Flowline, and Wetland Map*
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: *1:24000; Bartlettsville, IN (1994).*
- Natural Resources Conservation Service Soil Survey. Citation: *Lawrence County Soil Survey*
- National wetlands inventory map(s). Cite name: *USFWS NWI Wetlands*
- State/local wetland inventory map(s):
- FEMA/FIRM maps: *IDNR Best Available Flood Hazard Data (2023); Panel 18093C0064C*
- 100-year Floodplain Elevation is: _____ (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): *State of Indiana Best Available Orthophotography 2021*
or Other (Name & Date): *Ground Photographs (July 5 & 7, 2023; August 17, 2023; September 19, 2023)*
- Previous determination(s). File no. and date of response letter:

- Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of Regulatory staff member completing PJD

 September 21, 2023

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)¹

¹Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Categorical Exclusion
Appendix G
Public Involvement



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Michael Smith, Commissioner

May 12, 2023

SAMPLE NOTICE OF SURVEY LETTER

Re: Des. No.: 2200992, SR 58 Small Structure Project

Notice of Entry for Survey or Investigation

May 12, 2023

Dear Property Owner:

Our information indicates that you own or occupy property near the above referenced small structure project located on SR 58 approximately 3.82 miles east of SR 37 in Lawrence County. Representatives of the Indiana Department of Transportation (AZTEC Engineering Group, Inc.) will be conducting environmental surveys of the project area in the near future. It may be necessary for them to enter onto your property to complete this work. This is permitted under Indiana Code § 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself to you, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else, please let us know the name of the new owner or occupant so that we can contact them about the survey.

Please read the attached notice to inform you of what the “Notice of Entry for Survey or Investigation” means. The survey work may include the identification and mapping of wetlands, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites), and various other environmental studies. The information we obtain from such studies is necessary for the proper planning and design of this highway project.

If any problems do occur please contact Mike Myers, AZTEC Engineering, at 480.766.3331 or mmyers@aztec.us.

Please be aware that you have the right to request any or all artifacts collected from your property. If you do not ask that artifacts be returned to you, all recovered archaeological material will be curated at a state-approved Qualified Curation Facility. If you wish to have artifacts returned to you, please call or email Matthew Coon at 317-697-9752 or mcoon@indot.in.gov.

It is our sincere desire to cause as little inconvenience as possible during this survey, and we thank you in advance for your cooperation.

Sincerely,

Brynne Taylor
Environmental Planner
AZTEC Engineering Group, Inc.

Enclosures: As noted



Indiana Department of Transportation Notice of Entry for Survey or Investigation Indiana Department of Transportation

If you have received a “Notice of Entry for Survey or Investigation” from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project’s development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department’s authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn’t even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project’s limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limits but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you have received a “Notice of Entry for Survey or Investigation”, remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.

Categorical Exclusion
Appendix H
Air Quality

Indiana Department of Transportation (INDOT)
 State Preservation and Local Initiated Projects FY 2024 - 2028

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2024	2025	2026	2027	2028
Comments: All RW Funding move from FY25 to FY24.																	
Indiana Department of Transportation	43971 / 2100564	Init.	US 50	Bridge Deck Replacement	Vincennes	0	NHPP	\$18,691,765.00	Road Construction	CN	\$959,200.00	\$239,800.00			\$1,199,000.00		
									Bridge Construction	CN	\$12,634,400.00	\$3,158,600.00			\$15,793,000.00		
Performance Measure Impacted: Bridge Condition																	
Location: EB over EAST FORK WHITE RIVER, 01.08 E SR 37																	
Comments: Include DES 2100564, 2100569, 2100707, 2101162																	
Indiana Department of Transportation	43971 / 2100564	M 15	US 50	Bridge Deck Replacement	Vincennes	0	NHPP	\$17,957,561.00	Bridge Construction	CN	\$24,395,031.20	\$6,098,757.80			\$15,593,000.00	\$14,900,789.00	
									Road Construction	CN	\$1,884,262.40	\$471,065.60			\$1,199,000.00	\$1,156,328.00	
Performance Measure Impacted: Bridge Condition																	
Location: EB over EAST FORK WHITE RIVER, 01.08 E SR 37																	
Comments: Move CN funds from FY 2026 to FY 2027																	
Indiana Department of Transportation	43998 / 2100732	Init.	SR 450	Bridge Deck Overlay	Vincennes	0	STBG	\$4,100,240.00	Bridge Construction	CN	\$2,536,800.00	\$634,200.00			\$3,171,000.00		
Performance Measure Impacted: Bridge Condition																	
Location: over SALT CREEK, 02.12 W SR 158																	
Comments: Include DES 2100286, 2100713, 2100732																	
Indiana Department of Transportation	44365 / 2200944	Init.	SR 37	Traffic Signals Modernization	Vincennes	0	NHPP	\$1,028,912.00	Safety Construction	CN	\$1,940,000.00	\$485,000.00	\$2,425,000.00				
Performance Measure Impacted: Safety																	
Location: SR 37 at intersection of Patton Hill Road																	
Comments: Include DES 2200944, 2200945																	
Indiana Department of Transportation	44373 / 2200992	Init.	SR 58	Small Structure Replacement	Vincennes	.1	STBG	\$903,000.00	District Other ROW	RW	\$19,200.00	\$4,800.00	\$24,000.00				
									District Other Construction	CN	\$600,000.00	\$150,000.00	\$200,000.00	\$550,000.00			
Performance Measure Impacted: Bridge Condition																	
Location: 3.82 miles E of JCT with SR37																	
Comments: Include DES 2200992																	
Indiana Department of Transportation	44461 / 2200573	Init.	SR 446	Small Structure Replacement	Seymour	0	STBG	\$3,755,401.00	Bridge ROW	RW	\$52,000.00	\$13,000.00		\$65,000.00			
									Bridge Construction	CN	\$2,128,800.00	\$532,200.00				\$2,661,000.00	
Performance Measure Impacted: Bridge Condition																	
Location: Over Unnamed Ditch, 1.30 miles N of SR 58																	

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

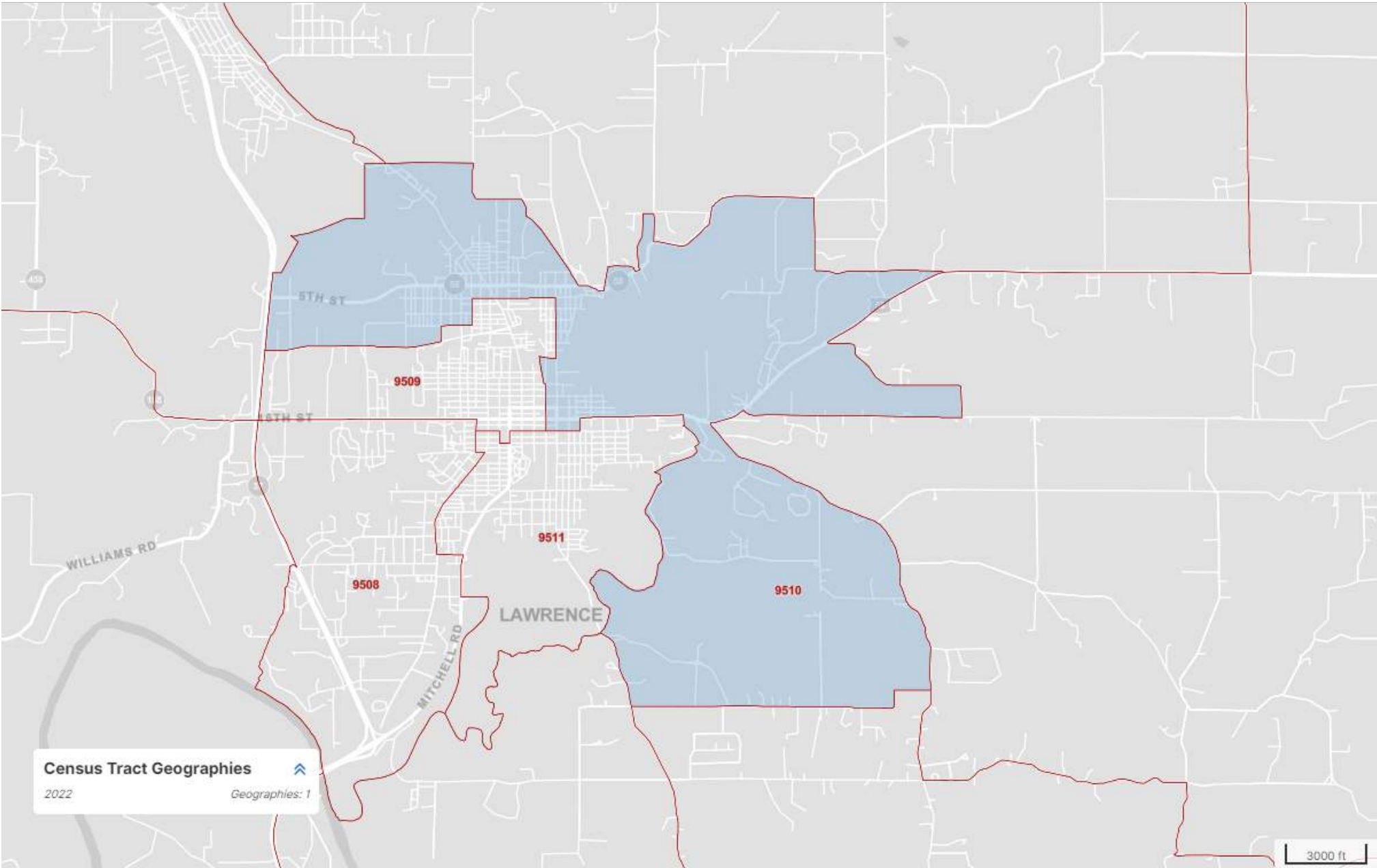
Categorical Exclusion
Appendix I
Additional Studies/Reports

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

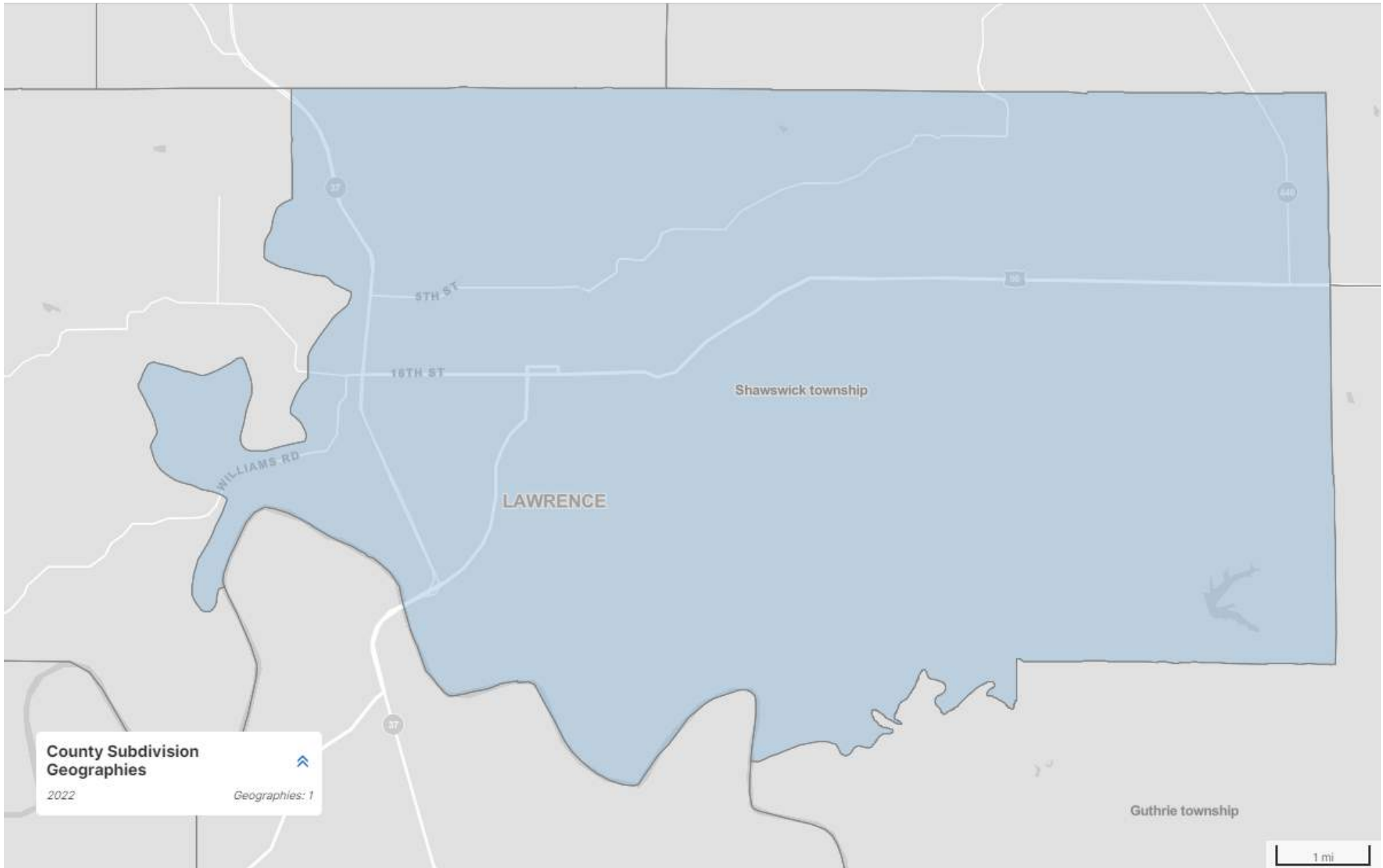
ProjectNumber	SubProjectCode	County	Property
1800010	1800010	Lawrence	Spring Mill State Park & Donaldson's Cave Nature Preserve
1800132	1800132	Lawrence	Mitchell Park and Pool
1800161	1800161C	Lawrence	Spring Mill State Park
1800162	1800162	Lawrence	Spring Mill State Park & Donaldson's Cave Nature Preserve
1800171	1800171N	Lawrence	Spring Mill State Park
1800177	1800177C	Lawrence	Spring Mill State Park
1800180	1800180	Lawrence	Spring Mill State Park & Donaldson's Cave Nature Preserve
1800309	1800309B	Lawrence	Spring Mill State Park
1800312	1800312P	Lawrence	Spring Mill State Park
1800363	1800363DD	Lawrence	Spring Mill State Park
1800413	1800413T	Lawrence	Spring Mill State Park
1800433	1800433	Lawrence	Spring Mill State Park & Donaldson's Cave Nature Preserve
1800612	1800612	Lawrence	Spring Mill State Park

*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.

Map of AC: Census Tract 9510



Map of COC: Shawswick Township (County Subdivision)



HISPANIC OR LATINO ORIGIN BY RACE

TABLE ID: B03002
 SURVEY/PROGRAM: American Community Survey
 PRODUCT: ACS 5-Year Estimates Detailed Tables

Note: The table shown may have been modified by user selections. Some information may be missing.

Label	Shawswick township, Lawrence County, Indiana		Census Tract 9510; Lawrence County; Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	20,727	±39	3,730	±392
Not Hispanic or Latino:	20,054	±87	3,618	±399
White alone	19,127	±268	3,507	±403
Black or African American alone	92	±35	17	±22
American Indian and Alaska Native alone	38	±45	0	±13
Asian alone	111	±95	37	±44
Native Hawaiian and Other Pacific Islander alone	4	±8	0	±13
Some other race alone	168	±184	11	±17
Two or more races:	514	±156	46	±45
Two races including Some other race	86	±81	6	±6
Two races excluding Some other race, and three or more races	428	±135	40	±45
Hispanic or Latino:	673	±80	112	±84
White alone	266	±176	24	±40
Black or African American alone	0	±24	0	±13
American Indian and Alaska Native alone	16	±27	16	±27
Asian alone	0	±24	0	±13
Native Hawaiian and Other Pacific Islander alone	0	±24	0	±13
Some other race alone	57	±48	4	±11
Two or more races:	334	±183	68	±70
Two races including Some other race	294	±159	68	±70
Two races excluding Some other race, and three or more races	40	±52	0	±13

Number Non-white/minority	1,600	223
Percent Non-white/minority	7.72	5.98
125 Percent of COC	9.65	AC < 125% COC
Potential Minority EJ Impact?		No



Hispanic or Latino Origin by Race

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Shawswick township, Lawrence County, Indiana

Census Tract 9510; Lawrence County; Indiana

Label	Estimate	Margin of Error	Estimate	Margin of Error
▼ Total:	20,727	±39	3,730	±392
▼ Not Hispanic or Latino:	20,054	±87	3,618	±399
White alone	19,127	±268	3,507	±403
Black or African American alone	92	±35	17	±22
American Indian and Alaska Native alone	38	±45	0	±13
Asian alone	111	±95	37	±44
Native Hawaiian and Other Pacific Islander alone	4	±8	0	±13
Some other race alone	168	±184	11	±17
▼ Two or more races:	514	±156	46	±45
Two races including Some other race	86	±81	6	±6
Two races excluding Some other race, and three or more races	428	±135	40	±45
▼ Hispanic or Latino:	673	±80	112	±84
White alone	266	±176	24	±40
Black or African American alone	0	±24	0	±13
American Indian and Alaska Native alone	16	±27	16	±27
Asian alone	0	±24	0	±13
Native Hawaiian and Other Pacific Islander alone	0	±24	0	±13
Some other race alone	57	±48	4	±11
▼ Two or more races:	334	±183	68	±70
Two races including Some other race	294	±159	68	±70
Two races excluding Some other race, and three or more races	40	±52	0	±13

Table Notes

Hispanic or Latino Origin by Race

Survey/Program: American Community Survey

Universe: Total population

Year: 2022

Estimates: 5-Year

Table ID: B03002

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st each decennial year. In between censuses, the Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Information about the American Community Survey (ACS) can be found on the ACS website. Supporting documentation including code lists, subject definitions, data accuracy, and statistical testing, and a full list of ACS tables and table shells (without estimates) can be found on the Technical Documentation section of the ACS website.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the [Methodology](#) section.

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The Hispanic origin and race codes were updated in 2020. For more information on the Hispanic origin and race code changes, please visit the American Community Survey Technical Documentation website.

The 2018-2022 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on 2020 Census data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

-

The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

**

The margin of error could not be computed because there were an insufficient number of sample observations.

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

TABLE ID: B17001
 SURVEY/PROGRAM: American Community Survey
 PRODUCT: ACS 5-Year Estimates Detailed Tables
 Note: The table shown may have been modified by user selections. Some information may be missing.

Label	Shawswick township, Lawrence County, Indiana		Census Tract 9510; Lawrence County; Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	20,127	±83	3,617	±400
Income in the past 12 months below poverty level:	2,436	±439	492	±189
Male:	870	±239	136	±76
Under 5 years	48	±36	0	±13
5 years	7	±11	7	±11
6 to 11 years	59	±34	0	±13
12 to 14 years	69	±70	0	±13
15 years	21	±31	0	±13
16 and 17 years	20	±30	0	±13
18 to 24 years	110	±74	0	±13
25 to 34 years	112	±60	15	±25
35 to 44 years	126	±75	48	±56
45 to 54 years	55	±56	0	±13
55 to 64 years	70	±38	29	±27
65 to 74 years	137	±60	28	±25
75 years and over	36	±31	9	±15
Female:	1,566	±283	356	±156
Under 5 years	43	±43	17	±29
5 years	34	±53	34	±53
6 to 11 years	49	±39	0	±13
12 to 14 years	39	±35	0	±13
15 years	29	±46	25	±44
16 and 17 years	42	±38	0	±13
18 to 24 years	185	±86	35	±41
25 to 34 years	254	±106	37	±43
35 to 44 years	193	±113	50	±57
45 to 54 years	180	±96	58	±72
55 to 64 years	254	±74	49	±38
65 to 74 years	139	±58	9	±14
75 years and over	125	±69	42	±40
Income in the past 12 months at or above poverty level:	17,691	±443	3,125	±454
Male:	8,855	±343	1,577	±274
Under 5 years	403	±124	76	±81
5 years	54	±52	0	±13
6 to 11 years	415	±122	130	±71
12 to 14 years	398	±121	75	±66
15 years	100	±56	0	±13
16 and 17 years	300	±131	127	±96
18 to 24 years	613	±191	56	±49
25 to 34 years	1,137	±164	184	±78
35 to 44 years	1,095	±152	201	±86
45 to 54 years	1,015	±181	203	±115
55 to 64 years	1,646	±177	210	±92
65 to 74 years	1,015	±140	249	±89
75 years and over	664	±163	66	±54
Female:	8,836	±387	1,548	±255
Under 5 years	360	±113	67	±45
5 years	89	±70	41	±41
6 to 11 years	652	±164	141	±84
12 to 14 years	414	±150	91	±68
15 years	72	±60	0	±13
16 and 17 years	103	±53	19	±22
18 to 24 years	543	±138	43	±37
25 to 34 years	846	±147	297	±98
35 to 44 years	1,161	±189	196	±123
45 to 54 years	1,013	±196	180	±86
55 to 64 years	1,214	±160	104	±48
65 to 74 years	1,365	±202	275	±143
75 years and over	1,004	±151	94	±68

Percent Low-income 12.10 13.60
 125 Percent of COC 15.13 AC < 125% COC

Potential Low-income EJ Impact? No

Poverty Status in the Past 12 Months by Sex by Age

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Shawswick township, Lawrence County, Indiana			Census Tract 9510; Lawrence County; Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error
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▼ Male:	870	±239	136	±76
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12 to 14 years	69	±70	0	±13
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16 and 17 years	20	±30	0	±13
18 to 24 years	110	±74	0	±13
25 to 34 years	112	±60	15	±25
35 to 44 years	126	±75	48	±56
45 to 54 years	55	±56	0	±13
55 to 64 years	70	±38	29	±27
65 to 74 years	137	±60	28	±25
75 years and over	36	±31	9	±15
▼ Female:	1,566	±283	356	±156
Under 5 years	43	±43	17	±29
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15 years	29	±46	25	±44
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▼ Male:	8,855	±343	1,577	±274
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55 to 64 years	1,214	±160	104	±48
65 to 74 years	1,365	±202	275	±143
75 years and over	1,004	±151	94	±68

Table Notes

Poverty Status in the Past 12 Months by Sex by Age

Survey/Program: American Community Survey

Universe: Population for whom poverty status is determined

Year: 2022

Estimates: 5-Year

Table ID: B17001

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the Census Bureau's Population Estimates Progr...

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Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates

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Explanation of Symbols:

- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, t margin of error associated with a median was larger than the median itself.

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median- The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

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