Indiana Department of Environmental Management
Office of Water Quality
Wetlands Section

Publication Date:
July 8, 2024

Closing Date:
July 29, 2024

PUBLIC NOTICE

IDEM ID Number:
2024-331-44-EJW-A

Corps of Engineers ID Number:
2024-00208-144-R24

To all interested parties:

This letter shall serve as a formal notice of the receipt of an application for **Section 401 Water Quality Certification** by the Indiana Department of Environmental Management (IDEM). The purpose of the notice is to inform the public of active applications submitted for water quality certification under Section 401 of the Clean Water Act (33 U.S.C. § 1341) and to solicit comments and information on any impacts to water quality related to the proposed project. IDEM will evaluate whether the project complies with Indiana's water quality standards as set forth at 327 IAC 2.

1. Applicant:
Alap Patel
Shipsy, LLC
7333 N SR 9
Howe, IN 46746

2. Agent:
Kat Pain
Meristem, LLC
877 Port Drive
Avon, IN 46123

3. Project location: Latitude: 41.656017 Longitude: -85.580847
Approximately 0.10 miles North/Northwest of W US Highway 20 and N State Road 5 intersection in LaGrange County.

4. Affected waterbody: Cotton Lake Ditch and one federally jurisdictional emergent wetland.

5. Project Description: The applicant proposes to construct a hotel and convenience store on 3.9 acres near Shipshewana, LaGrange County. The development will include two road entrances, a parking lot, associated utilities, and a stormwater basin.

To construct the required stormwater basin and parking lot, a 413-foot long, 72-inch wide culvert will be installed to redirect 374 linear feet of Cotton Lake Ditch. 90 linear feet of the upstream will be left open prior to the rip rap and culvert installations further downstream. 36 linear feet of rip rap will be installed to tie in the culvert installation. 0.131 acres of emergent wetland, adjacent to Cotton Lake Ditch, will also be impacted by these activities. To compensate for impacts to Waters of the United States, the applicant proposes to purchase 410 linear feet of stream credit and 0.262 acres of emergent wetland credit from the St. Joseph River Service Area of IDNR's In-Lieu Fee program.

Additional information may be found on line at https://www.in.gov/idem/5474.htm

Comment period: Any person or entity who wishes to submit comments or information relevant to the aforementioned project may do so by the closing date noted above. Only comments or information related to water quality or potential impacts of the project on water quality can be considered by IDEM in the water quality certification review process.

Public Hearing: Any person may submit a written request that a public hearing be held to consider issues related to water quality in connection with the project detailed in this notice. The request for a hearing should be submitted within the comment period to be considered timely. The request should also state the reason for the public hearing as specifically as possible to assist IDEM in determining whether a public hearing is warranted.

Questions?

Additional information may be obtained from Evan White, Project Manager, by phone at 317-671-6698 or by e-mail at EVWhite@idem.in.gov. Please address all correspondence to the project manager and reference the IDEM project identification number listed on this notice. Indicate if you wish to receive a copy of IDEM's final decision. Written comments and inquiries may be forwarded to -

Indiana Department of Environmental Management
100 North Senate Avenue
MC65-42 WQS IGCN 1255
Indianapolis, Indiana 46204-2251 FAX: 317/232-8406

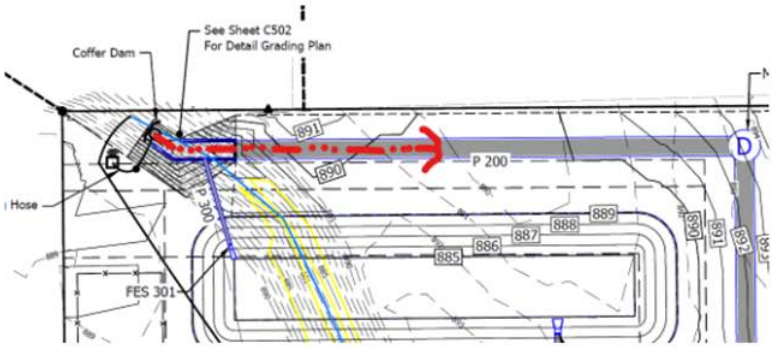
Re: [Non-DoD Source] Re: Shipsy LLC proposed development/Cotton Lake Ditch stream piping/relocation

MW
Marc Woernle <marc.woernle@meristem.life>
To Cassidy, Ryan D CIV USARMY CELRE (USA)
Cc Kat Pain; White, Evan

You replied to this message on 7/3/2024 10:21 AM.

Ryan -

See below, this is what we mean by 90ft...



Thank you

Marc Woernle
Meristem
317-617-4796

MERISTEM
Where New Growth Happens

877 Port Drive
Avon, Indiana 46123
317-324-8542

April 10th, 2024

Evan White
Project Manager
Indiana Department of Environmental Management
100 N Senate Ave
Indianapolis, IN 46204

Isolated Wetland Impact Permit (IWIP) Application
NW of SR 5 and US HWY 20
LaGrange County, Indiana

Dear Mr. White,

Meristem is submitting an Isolated Wetland Impact Application on the behalf of Shipsy, LLC for proposed stream and wetland impacts on a property located northwest of the intersection of SR 5 and US HWY 20, in Section 15, Township 37 North, Range 8 East in LaGrange County, Indiana (see Attachment A).

Proposed permanent impacts are to include the relocation of intermittent Stream 1 (Cotton Lake Ditch) in order to construct a parking lot and stormwater basin for a proposed hotel and convenience store. 374 linear feet (LF) of Cotton Lake Ditch is proposed to be piped into 503 LF of 72" RCP (see Attachment B). In addition, proposed permanent impacts include 36 LF of riprap and a headwall. The headwall and riprap are located along the northwestern end of the stream on the property and will serve to tie the piped stream back into the existing stream channel. The 36 LF of riprap will also serve as erosion protection from a stormwater outlet for the proposed basin. Temporary impacts include cofferdams and pump-arounds during the construction of the proposed activities within Cotton Lake Ditch. Total temporary impacts (from cofferdam to cofferdam) include 410 LF of Cotton Lake Ditch. Emergent Wetland A is proposed to be permanently impacted in entirety (0.131-acre) to construct a parking lot and stormwater basin for the proposed hotel and convenience store.

Meristem is utilizing a preliminary jurisdictional determination to concur that Cotton Lake Ditch and Wetland A fall under the jurisdiction of the U.S. Army Corps of Engineers and the Indiana Department of Environmental Management (IDEM). Within the limits of the project property, Cotton Lake Ditch has an average OHWM width of 2.5 feet and an OHWM depth of 6 inches, with substrates primarily consisting of sand, silt, and organic matter. Photographs of the stream are included in Attachment C, Appendix C.

Total permanent impacts to water resources from proposed construction activities will equal **0.154-acre**. Table 1 on the following page outlines the proposed permanent impacts.

Table 1: Proposed Permanent Impacts

Water Resource	Proposed Impact	Linear Feet of Impact	Acres of Impact
Cotton Lake Ditch	Piping	374	0.021
Cotton Lake Ditch	Riprap and Headwall	36	0.002
Wetland A	Fill for parking lot/ excavation for stormwater basin	N/A	0.131
Totals	-	**410**	**0.154**

Mitigation is to occur in the form of the In-Lieu Fee program. Calculations for the amount paid to the In-Lieu Fee program are as follows:

Total impacts to emergent wetlands = 0.131-acre at a 2:1 for Class 2 wetlands

($120,000/ acre) x 2 x 0.131 acre = $31,440 + (20% add on for USACE $6,288)

Total = $37,728

Total impacts to intermittent streams = 410 LF

(410 LF) x ($600/LF) = $246,000 + (20% add on for USACE $49,200)

Total = $295,200

Total In-Lieu Fee cost= $332,928

Best management practices for erosion and sediment control will be utilized to prevent any additional impacts to the on-site water resources.

If you have any questions or need any additional information, please do not hesitate to contact me at (317) 490-3590 or kat.pain@meristem.life / or Marc Woernle at (317) 617-4796 or marc.woernle@meristem.life.

Sincerely,

Kat Pain
Ecologist
Meristem, LLC

CC:
USACE Detroit District
Marc Woernle, Meristem, LLC

Enclosed:
Attachment A: Isolated Wetland Impact Permit (IWIP) Form 51821
Attachment B: Proposed Engineering Design Plans
Attachment C: Water Resources Delineation Report

Attachment A: Isolated Wetland Impact Permit (IWIP) Form 51821

APPLICATION FOR AUTHORIZATION TO DISCHARGE DREDGED OR FILL MATERIAL TO ISOLATED WETLANDS AND/OR WATERS OF THE STATE

State Form 51821 (R2 / 11-15)

Indiana Department of Environmental Management

INSTRUCTIONS: 1. Read the instruction sheet before filling out this form.

2. You must complete all applicable sections of this form

1. Applicant Information	2. Agent Information
Name of Applicant Shipsy, LLC	Name of Agent Meristem, LLC
Mailing address *(Street/ PO Box/ Rural Route, City, State, ZIP Code)* Super 8 Howe 7333 N SR 9 Howe, IN 46746	Mailing address *(Street/ PO Box/ Rural Route, City, State, ZIP Code)* 877 Port Drive Avon, Indiana, 46123
Daytime Telephone Number 413-374-6027	Daytime Telephone Number (317) 490-3590
Fax Number	Fax Number
E-mail address *(optional)* alap1418@yahoo.com	E-mail address *(optional)* kat.pain@meristem.life
Contact person *(required)* Alap Patel	Contact person Kat Pain

3. Project / Tract Location

County LaGrange		Nearest city or town Shipshewana	
U.S.G.S. Quadrangle map name *(Topographic map)* Shipshewana		Project street address *(if applicable)* NW of SR 5 and US HWY 20 Shipshewana, IN 46565	
Quarter	Section 15	Township 37 North	Range 8 East
Type of aquatic resource(s) to be impacted *(Attach Worksheet One.)* One emergent wetland and one intermittent stream		Project name or title *(if applicable)*	

Other location descriptions or driving directions

From Shipshewana, head south on S Van Buren Street for approximately 1.4 miles. The site will be on the right hand side of the road, just before the intersection of US HWY 20 and SR 5.

4. Project Purpose and Description (*Use additional sheet(s) if required.*)

Has any construction been started? ☐ Yes ☒ No	Anticipated start date *(month, day, year)* 05/20/2024

If yes, how much work is completed?

N/A

Purpose of project and overview of activities

Construct a hotel and convenience store to provide lodging and retail/ food options within the area. The overview of activites includes piping Cotton Lake Ditch and filling an emergent wetland to construct a hotel and convenience store with a parking lot and two driveway entrances/ exits. Contruction activities will include the installation of stormwater pipes and a stormwater basin.

5. Avoidance, Minimization, and Mitigation Information: Applicants must answer all of the following questions
(*Use additional sheet(s) if necessary - provide a detailed response to all applicable questions.*)

A. For projects with Class II isolated wetlands –

1. Is there a reasonable alternative to the proposed activity?
   None that would be economically feasible

2. Is the proposed activity reasonably necessary or appropriate?
   Yes

B. For projects with Class III wetlands, adjacent wetlands, and/or streams, rivers, lakes or other water bodies –

1. Is there a practicable alternative to the proposed activity?
   The only alternative would be a no-build alternative which is not economically feasible.

2. Have practicable and appropriate steps to minimize impacts to water resources been taken?
   Impacts to water resources are unavoidable for the construction of this project.

Describe all compensatory mitigation required for unavoidable impacts.
Mitigation is to occur in the form of the In-Lieu Fee program.
Total impacts to emergent wetlands = 0.131 acre
Class 2 wetlands at a 2:1
($120,000/ acre) x 2 x 0.131 acre = $31,440 + (20% add on for USACE $6,288)
Total = $37,728
Total impacts to intermittent streams = 410 LF
(410 LF) x ($600/LF) = $246,000 + (20% add on for USACE $49,200)
Total = $295,200

Total In-Lieu Fee cost= $332,928

6. Drawing / Plan Requirements *(Applicants must provide the following.)*

a. Top/aerial/overhead views of the project site showing existing conditions and proposed construction.
b. Cross sectional view of areas of fill or alterations to streams and other waters.
c. North arrow, scale, property boundaries.
d. Include wetland delineation boundary *(if applicable)*. Label all wetlands (jurisdictional, isolated and exempt) as I-1, I-2, I-3, etc. and the mitigation areas as M-1, M-2, etc.
e. Location of all surface waters, including wetlands, erosion control measures, existing and proposed structures, fill and excavation locations, disposal area for excavated material, including quantities, and wetland mitigation site *(if applicable)*.
f. Approximate water depths and bottom configurations *(if applicable)*.

7. Supplemental Application Materials *(Applicants must provide the following.)*

a. A wetland delineation of all wetlands on the project site *(for projects with wetland impacts)*.
b. At least three photographs of the project site. Indicate the photo locations on the project plans.
c. If isolated wetlands are present, a letter from the Corps of Engineers verifying this statement.
d. Wetland mitigation plan and monitoring report.
e. Classification of all isolated wetlands on the tract *(if isolated wetlands are present onsite)*.
f. Copies of all applicable local permits and/or resolutions pertaining to the project or tract.
g. Tract history *(see instructions)*.

8. Additional information that MAY be required *(IDEM will notify you if needed.)*

a. Erosion control and/or storm water management plans.
b. Sediment analysis.
c. Species surveys for fish, mussels, plants and threatened or endangered species.
d. Stream habitat assessment.
e. Any other information IDEM deems necessary to review the proposed project.

9. Permitting Requirements

a. Does this project require the issuance of a Department of the Army Section 404 Permit from the US Army Corps of Engineers? ☒ Yes ☐ No

If no, you do not need to answer Part b.

b. Have you applied for an Army Corps of Engineers Section 404 permit? ☐ Yes ☒ No

If yes, please supply the Corps of Engineers ID Number, the Corps of Engineers District, the project manager, and a copy of any correspondence with the Corps. **If no, contact** the Army Corps of Engineers regarding the possible need for a permit application.

c. Have you applied for, received, or been denied a permit from the Department of Natural Resources for this project? ☐ Yes ☒ No

Please give the permit name, permit number, and date of application, issuance or denial.
N/A

d. Have you applied for, received, or been denied any other federal, state, or local permits, variances, licenses, or certifications for this project? ☐ Yes ☒ No

Please give the permit name, agency from which it was obtained, permit number, and date of issuance or denial.
N/A

10. Adjoining Property Owners and Addresses

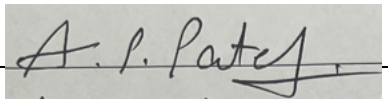
List the names and addresses of landowners adjacent to the property on which your project is located and the names and addresses of other persons (or entities) potentially affected by your project. Use additional sheet(s) if required.

Name	Address *(number and street)*	City	State	ZIP Code
Jan Bollinger	8065 W US 20	Shipshewana	IN	46565
Community Hospital of LaGrange	PO Box 5600	Fort Wayne	IN	46895
Enos B and Viola Miller	1180 N SR 5	Shipshewana	IN	46565
State of Indiana	100 N Senate Ave Rm N758	Indianapolis	IN	46204

Name	Address *(number and street)*	City	State	ZIP Code

11. Signature - Statement of Affirmation

I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true and accurate. I certify that I have the authority to undertake and will undertake the activities as described in this application. I am aware that there are penalties for submitting false information. I understand that any changes in project design subsequent to IDEM's granting of authorization to discharge to a water of the state are not authorized and I may be subject to civil and criminal penalties for proceeding without proper authorization. I agree to allow representatives of the IDEM to enter and inspect the project site. I understand that the granting of other permits by local, state, or federal agencies does not release me from the requirement of obtaining the authorization requested herein before commencing the project.

Applicant's Signature:  Date: 4/9/2024 *(mm/dd/yyyy)*

Print Name: Alap P. Patel Title: Member

Worksheet – Summary of Onsite Water Resources and Project Impacts

A. Jurisdictional Wetlands (Existing Conditions)		Jurisdictional Wetlands (Proposed Impacts)			
Wetland Type	**Size of wetland *(acreage)***	**To be Impacted?**	**Acreage**	**Fill quantity *(cys)***	**ATF**
☒ EM ☐ SS ☐ FO	0.131	☒ Yes ☐ No	0.131	634.04	NO
☐ EM ☐ SS ☐ FO		☐ Yes ☐ No			
☐ EM ☐ SS ☐ FO		☐ Yes ☐ No			
☐ EM ☐ SS ☐ FO		☐ Yes ☐ No			
☐ EM ☐ SS ☐ FO		☐ Yes ☐ No			
☐ EM ☐ SS ☐ FO		☐ Yes ☐ No			
☐ EM ☐ SS ☐ FO		☐ Yes ☐ No			

Describe the type and composition of fill material to be placed in wetlands on the project site:
Clean earthen fill and asphalt

Describe the type and composition and quantity *(cubic yards)* of material proposed to be dredged or excavated from wetlands on the project site:
native soil: 62 cubic yards

B. Isolated Wetlands (Existing Conditions)			Isolated Wetlands (Proposed Impacts)			
Wetland Class	**Type**	**Size of wetland *(acreage)***	**To be Impacted?**	**Acreage**	**Fill quantity *(cys)***	**ATF**
☐ 1 ☐ 2 ☐ 3	☐ NF ☐ F		☐ Yes ☐ No			
☐ 1 ☐ 2 ☐ 3	☐ NF ☐ F		☐ Yes ☐ No			
☐ 1 ☐ 2 ☐ 3	☐ NF ☐ F		☐ Yes ☐ No			
☐ 1 ☐ 2 ☐ 3	☐ NF ☐ F		☐ Yes ☐ No			
☐ 1 ☐ 2 ☐ 3	☐ NF ☐ F		☐ Yes ☐ No			
☐ 1 ☐ 2 ☐ 3	☐ NF ☐ F		☐ Yes ☐ No			

Describe the type and composition of fill material to be placed in isolated wetlands on the project site:
N/A

Describe the type and composition and quantity *(cubic yards)* of material proposed to be dredged or excavated from isolated wetlands on the project site:
N/A

C. Bridges and Stream Crossings - provide the following information for EACH structure (*Use additional sheet(s) if required.*)

Stream name
N/A

Description of impacts

Length of upstream bank impacts:
Left side: Right side:

Length of downstream bank impacts:
Left side: Right side:

Bank protection fill placed below the Ordinary High Water Mark:
Volume per running foot:

Bank protection fill placed below the Ordinary High Water Mark:
Area of coverage:

D. Bank Stabilization – provide the following information for EACH segment (*Use additional sheet(s) if required.*)
Water body name N/A
Description of impacts
Length of shoreline or bank protection
Volume *(cubic yards)* of bank protection fill placed below the Ordinary High Water Mark per running foot
Area *(square feet)* of bank protection fill placed below the Ordinary High Water Mark

E. Stream Relocation	
Water body name Cotton Lake Ditch	
Description of impacts Piping of 374 LF of stream and installing 36 LF of riprap and a headwall in order to tie the piping back into the original stream location in the northwestern corner of the project	
Length of existing channel to be relocated *(linear feet)* 374	
Length of new channel to be constructed *(linear feet)* 503	
Existing channel to be backfilled? ☒ Yes ☐ No	Type of relocation ☒ Piping ☐ Open ☐ Channel ☐ Other:____
Type of fill and volume *(cubic yards)* clean earthen fill and asphalt 2,070 cy	

F. Open Water Fill
Water body name N/A
Description of impacts
Area of water body to be filled *(acres)*
Type of fill and volume *(cubic yards)*

Notes and Instructions for Authorization to Discharge Dredged or Fill Material to a State Regulated Wetland and/or Waters of the State Permit Application Form and Worksheet

Note to applicants:

This form is to be used by all persons who intend to discharge dredged or fill materials into wetlands, isolated wetlands, or any other water body regulated under state and federal law. Specifically, this form is to be used for the following:

1. Application for Section 401 Water Quality Certification for any project not covered by the Indiana Regional General Permit
2. Application for a State Regulated Wetland Permit authorized under HEA 1798 and HEA 1277, excluding any activities authorized under any of the State Regulated Wetland General Permits

Consult the Office of Water Quality Web site for information on the types of authorizations and requirements for projects regulated under these laws.

http://www.in.gov/idem/wetlands/index.htm

Do not submit this form until you are familiar with the various authorizations and proper forms for obtaining these authorizations. An application submitted on the incorrect form may result in delays in processing.

Applicants should also contact the Indiana Department of Natural Resources (DNR) regarding potential permit requirements associated with construction in a floodway or a public freshwater lake. You can reach the DNR Division of Water at (317) 232-4160 or toll free at (877) WATER-55.

Instructions for Completing the Application and Worksheet

Address all applications or questions to:

Indiana Department of Environmental Management
Office of Water Quality
Section 401 Water Quality Certification/State Isolated Wetlands Program
100 North Senate Ave.
Indianapolis, Indiana 46204

Telephone: (800) 451-6027 or (317) 233-8488

Print clearly or type.
Attach additional 8.5" x 11" sheets as necessary.

APPLICATION

Note: Some wetland activities may impact both U.S. navigable waters and state regulated isolated wetlands. In those situations, the project will require a Section 401 Water Quality Certification and Section 404 U.S. Corps of Engineers permit AND approval under the new State Isolated Wetland Regulatory Program. When IDEM receives an application that involves an activity that may impact both intrastate navigable waters and a state regulated wetland, current state law requires that we evaluate each activity using different authorities. IDEM will, at the request of an applicant, evaluate a project with multi-jurisdictional wetlands under the Section 401 certification framework and will provide one authorization for the project, applying the state regulated isolated wetlands law and federal Clean Water Act Section 401 authorities. If an applicant prefers that all IDEM approvals occur within one streamlined review process, a separate letter specifically requesting a combined review of the entire project should be submitted concurrently with the application.

Block 1 - Applicant Information
Provide your name, address, and telephone number. You MUST provide a contact name. For complex projects or projects with multiple contractors and responsible parties, designation of a single point of contact will speed up the review process and enable more timely responses to requests for information.

Block 2 - Agent Information
If you choose to be represented by an agent, provide the agent's address and telephone information. You are not required to have an agent.

Block 3 - Project Location
Provide specific information relating to the location of your proposed project. Provide accurate maps depicting the project location. Try to keep detail on maps to a minimum, focusing instead on the location of structures and associated water bodies. Consult the USGS Quadrangle maps for information on the quarter, section, township and range of the project. IDEM may require that you submit full size plans to supplement the 8 1/2" by 11" map sheets if the project is large or complex.

Block 4 - Project Purpose and Description
Provide the proposed or actual start date and the anticipated completion date. If you have started your project before obtaining authorization, you may be in violation of federal and/or state law. Give a narrative description of the proposed project. You should include any supplemental environmental reports, assessments, or other documents that explain or justify the proposed configuration of the project. Describe the purpose of the project (that is, what goal oroutcome will be met by the construction of the project).

Block 5 - Avoidance, Minimization, and Mitigation Information
You must describe possible alternatives to the proposed project that would avoid impacts to the aquatic resource that were considered during the project planning process. You must also describe ways to minimize impacts considered during the project planning process, including a description of how you plan to contain any dredged/excavated material to prevent re-entry into waterways or wetlands. Examples of alternatives include construction on the upland portions of the property; rerouting a roadway to avoid a wetland; or alternate design plans. Minimization of the impacts may decrease any mitigation requirements that might otherwise apply. Minimization may include reduction of the amount of dredging, filling, or vegetative clearing. For isolated wetlands only, enclosure of a copy of (1) a resolution of the executive of the county or municipality in which the wetland is located or (2) a permit or other approval from a local government entity having authority over the proposed use of the property on which the wetland is located; that includes a specific finding that the wetland activity is part of a

legitimate use proposed by the applicant on the property, substitutes for the information required on avoidance and minimization.

Answer all the questions in detail, providing example, drawings, or other supporting information to illustrate the steps taken to consider alternatives. Provide reasons why various alternatives were or were not considered.

In general, all impacts to wetlands or other waters that require the use of this form will require some form of compensatory mitigation. A detailed description ofthe mitigation plan must be provided, including: the location of the mitigation site, the size and type of mitigation to be performed, the construction sequence ortiming of the mitigation, information on post construction monitoring, mitigation techniques, and success criteria of the mitigation site. A mitigation plan, with overview drawings, planting lists, cross sectional views, and other relevant information is recommended as a supplement to answer this question.

Block 6 - Drawing/Plan Requirements
You must submit drawings/plans that are on 8 1/2 by 11 inch sheets. Your project will be delayed if these materials are not submitted in the formats specified in the application.

Block 7 - Supplemental Application Materials
All projects involving impacts to wetlands must be accompanied by a wetland delineation using the procedures established in the U.S. Army Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1 (January 1987). This delineation must be approved or reviewed by the Corps of Engineers in order for IDEM to determine the impacts to water bodies associated with the project. DO NOT submit an application involving impacts to wetlands without a wetland delineation. For projects that involve impacts to isolated wetlands, a letter from the Corps of Engineers that specifically makes this determination must be provided or the application will not be processed. Submittal of photographs depicting the project site is highly encouraged. Photos must be clearly labeled with the direction of the shot, the area depicted, and notes on relevant features. A map depicting the location of photos on the project site is also useful and should be included whenever photos are submitted.

For project sites with isolated wetlands, a tract history is also required. This history provides information on all the wetlands on the site prior to January 1, 2004, and describes any and all activities within these wetlands, including impacts allowed to wetlands exempt from regulation under the various provisions of federal and state law. Direct questions regarding this requirement to IDEM staff for clarification.

Block 8 - Additional Information That May Be Required
You are not required to submit the information specified in this section unless directed to do so by IDEM. However, you may submit the information if you anticipate that such information will be required. For example, if you are aware of issues on the proposed project site which may impact water resources, such as the presence of contaminated soils or sediments, endangered species, well field protection areas, or previously permitted activities on the project site, information regarding these points must be submitted with the certification application.

Block 9 - Permitting Requirements
Provide information regarding your application to the Corps of Engineers. If you have not yet contacted the Corps of Engineers, you must do so as soon as possible (SEE BLOCK 7). Provide information regarding any other federal, state, or local permits, variances, licenses, or certifications required for your project. Please indicate whether they were approved, denied, or are pending.

Block 10 - Adjoining Property Owners and Addresses
List the names and addresses of landowners adjacent to the property on which your project is located. Adjacent property owners are persons who share property lines with your property. Inclusion of names and addresses of other persons (or entities) potentially affected by your project must include persons within your neighborhood, lake association, or in the general vicinity that may have an interest in your project. Consult with IDEM for further clarification.

Block 11 - Signature - Statement of Affirmation
You must sign and date the application. If the applicant is a corporation, a responsible person from that corporation must sign. No other signatures will be accepted. The application will not be processed without the appropriate signature.

WORKSHEET

Note: When calculating any type of impact, all areas that are affected by placement of fill, bank armoring, culverting, excavation, or any other activity must be counted. When calculating open water impact, all areas within lakes, rivers, streams and the like must be counted. This includes areas under new bridge piers, beaches, and boat ramps, as examples. The Ordinary High Water Mark means that line on the shore of a water body established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, natural destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

- Fill out only the sections of this worksheet that apply to your project. -

Section A - Wetlands

This section is for wetlands determined to be under the jurisdiction of the U.S. Army Corps of Engineers (Corps) and that require a Section 404 permit as well as a Section 401 Water Quality Certification from IDEM. List the type of wetland as Emergent (EM), Scrub shrub (SS), or Forested (FO). "Emergent wetland" means a wetland characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. "Scrub shrub wetland" means a wetland dominated by woody vegetation having a height greater than three and two-tenths (3.2) feet, and a stem diameter less than three (3) inches. This includes true shrubs, young trees, and trees and shrubs stunted by environmental conditions. “Forested wetland” means a wetland dominated by woody vegetation that has a diameter, at breast height, greater than three (3) inches, regardless of total height. The size of the wetland must be determined by conducting a wetland delineation consistent with the protocols established in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual. The applicant must list whether or not the wetland will be impacted, the acreage of the impact, and the quantity of fill to be discharged into the wetland. The applicant must identify whether or not this is an after-the-fact (ATF) permit. An ATF permit is for impacts to wetlands or other water bodies under the jurisdiction of IDEM that did not receive authorization before the impacts occurred. Additionally, the applicant must describe the type and composition of material proposed to be discharged or removed from the wetland.

Section B - Isolated Wetlands
This section is for wetlands the Corps has determined to be isolated and no longer under their jurisdiction. The Corps jurisdictional determination letter must be included with the application. Isolated wetlands are considered State Regulated Wetlands and proposed impacts to these wetlands will be reviewed pursuant to IC 13-18-22. The class of wetland must be determined by the definitions outlined in IC-13-11-2-25.8. This is determined by assessing the vegetation type,

hydrologic function, habitat functions, values of the wetland, and disturbances to the wetland. The applicant must determine the type of wetland by designating the wetland as either Non-Forested (NF) or Forested (F). The size of the wetland must be determined by conducting a wetland delineation consistent with the protocols established in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual. The applicant must list whether or not the wetland will be impacted, the acreage of the impact, and the quantity of fill to be discharged into the wetland. The applicant must identify whether or not this is an after-the-fact (ATF) permit. An ATF permit is for impacts to wetlands or other water bodies under the jurisdiction of IDEM that did not receive authorization before the impacts occurred. Additionally, the applicant must describe the type and composition of material proposed to be discharged or removed from the wetland.

Section C - Bridges and Stream Crossings

This section is for projects that impact streams in order to construct, maintain, or protect structures used to cross the stream. The applicant must list the name of the stream to be impacted by the proposed project. The stream name can be found on the USGS Topographic map. If the stream does not have a name, identify it as a tributary to the next stream or water body with a name. Describe the proposed impacts in detail. Include the lengths of bank impacts to both banks upstream and downstream. Determination of left and right banks is made in the following manner- at the point furthest upstream on the project site, face downstream - the left bank is on your left and the right bank is on your right. Identify the volume per running foot of material to be discharged below the Ordinary High Water Mark (OHWM). Identify the total area below the OHWM to receive a discharge of fill material.

Section D - Bank Stabilization

This section is for projects that discharge fill material in order to stabilize eroding land along streams, lakes, or other water bodies. The applicant must list the name of the water body to be impacted by the proposed project. The name of the water body can be found on the USGS Topographic map. If the water body does not have a name, identify it as a tributary to the next stream or water body with a name. Provide the length of shoreline or bank impact. Identify the volume per running foot of material to be discharged below the Ordinary High Water Mark (OHWM). Identify the total area below the OHWM to receive a discharge of fill material.

Section E - Stream Relocation

This section is for projects that propose to relocate a stream from its existing banks either by open channel construction or by stream piping. The applicant must list the name of the stream to be impacted by the proposed project. The stream name can be found on the USGS Topographic map. If the stream does not have a name, identify it as a tributary to the next stream or water body with a name. Describe the impacts to the stream. Provide the linear feet of existing channel to be relocated and the length of new channel to be constructed. The applicant must state whether the old channel is proposed to be filled and describe the type and quantity of fill to be used to fill the old channel. The applicant must also provide the type of relocation, new channel or piping.

Section F - Open Water Fill

This is for projects where the fill material extends beyond the edge of the shoreline into open water. Some examples include the filling of pit mines, borrow pits, and other land reclamation projects. Provide the name of the water body to be impacted. If the water body does not have a name, identify it as unnamed open water body. Describe the impacts to the water body including the area to be filled and the type and quantity of fill material to be discharged.

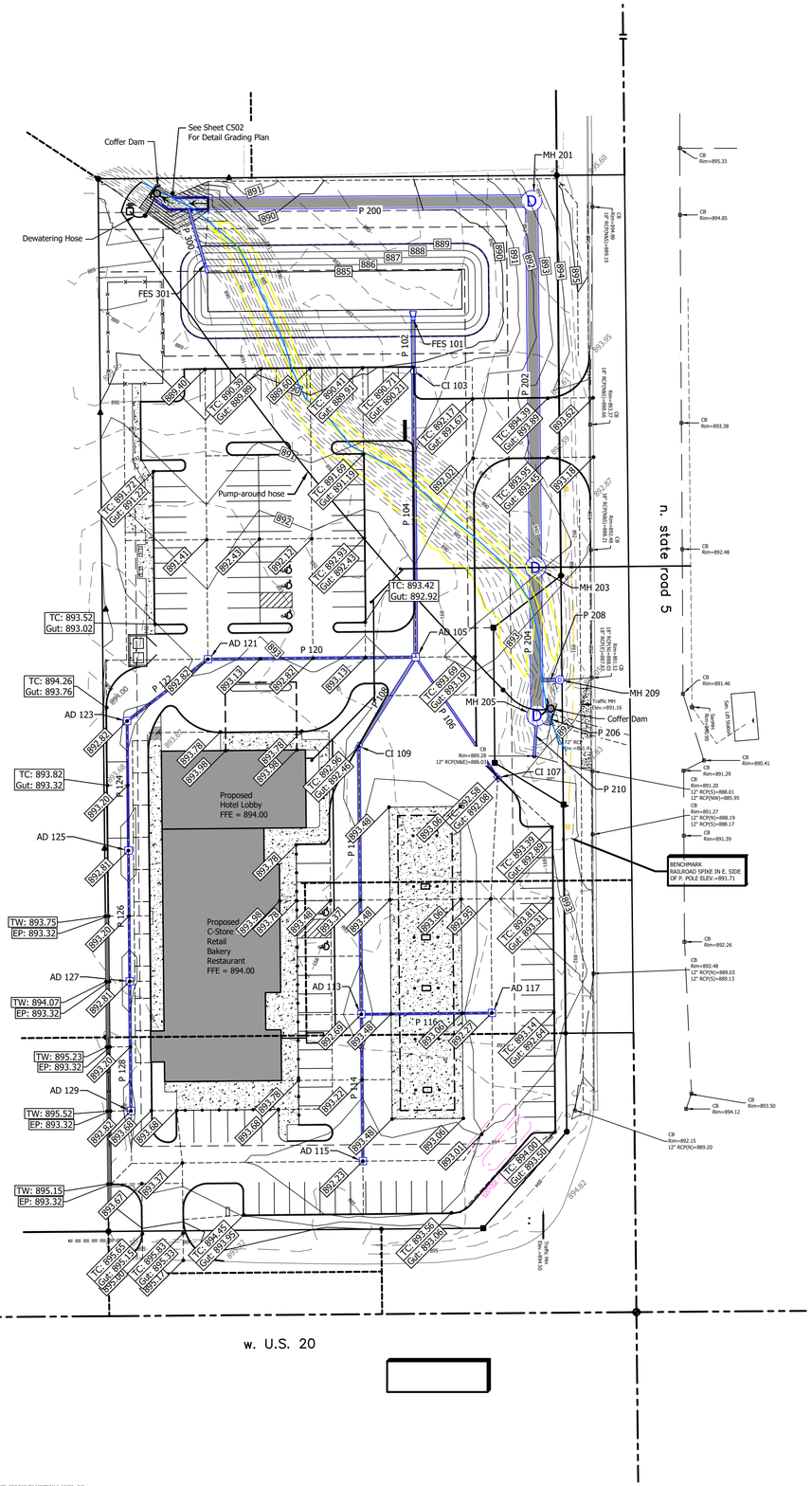
Attachment B: Proposed Engineering Design Plans

Storm Structure Data Table

Name	Description	Pipes In	Pipes Out	AD / MH = Rim CI = FG
AD 105	Area Drain	P 120, 15" Corrugated HDPE Pipe Invert Elevation = 887.06 P 108, 18" Corrugated HDPE Pipe Invert Elevation = 887.06 P 106, 12" Corrugated HDPE Pipe Invert Elevation = 887.06	P 104, 24" Corrugated HDPE Pipe Invert Elevation = 887.06	892.84
AD 113	Area Drain	P 114, 12" Reinforced Concrete Pipe Invert Elevation = 889.26 P 116, 12" Corrugated HDPE Pipe Invert Elevation = 889.26	P 110, 18" Corrugated HDPE Pipe Invert Elevation = 889.26	892.69
AD 115	Area Drain		P 114, 12" Reinforced Concrete Pipe Invert Elevation = 890.12	892.23
AD 117	Area Drain		P 116, 12" Corrugated HDPE Pipe Invert Elevation = 890.17	892.27
AD 121	Area Drain	P 122, 15" Corrugated HDPE Pipe Invert Elevation = 888.29	P 120, 15" Corrugated HDPE Pipe Invert Elevation = 888.29	892.82
AD 123	Area Drain	P 124, 12" Corrugated HDPE Pipe Invert Elevation = 888.89	P 122, 15" Corrugated HDPE Pipe Invert Elevation = 888.89	892.82
AD 125	Area Drain	P 126, 12" Corrugated HDPE Pipe Invert Elevation = 889.65	P 124, 12" Corrugated HDPE Pipe Invert Elevation = 889.65	892.81
AD 127	Area Drain	P 128, 12" Reinforced Concrete Pipe Invert Elevation = 890.42	P 126, 12" Corrugated HDPE Pipe Invert Elevation = 890.42	892.81
AD 129	Area Drain		P 128, 12" Reinforced Concrete Pipe Invert Elevation = 890.73	892.82
CI 103	Curb Inlet	P 104, 24" Corrugated HDPE Pipe Invert Elevation = 885.37	P 102, 24" Corrugated HDPE Pipe Invert Elevation = 885.37	890.24
CI 107	Curb Inlet		P 106, 12" Corrugated HDPE Pipe Invert Elevation = 889.21	892.08
CI 109	Curb Inlet	P 110, 18" Corrugated HDPE Pipe Invert Elevation = 887.68	P 108, 18" Corrugated HDPE Pipe Invert Elevation = 887.68	892.46
FES 101	Flared End Section	P 102, 24" Corrugated HDPE Pipe Invert Elevation = 885.07		887.31
FES 301	Flared End Section		P 300, 12" Reinforced Concrete Pipe Invert Elevation = 884.94	886.26
MH 201	Manhole	P 202, 72" Reinforced Concrete Pipe Invert Elevation = 880.79	P 200, 72" Reinforced Concrete Pipe Invert Elevation = 880.79	893.14
MH 203	Manhole	P 204, 72" Reinforced Concrete Pipe Invert Elevation = 881.11	P 202, 72" Reinforced Concrete Pipe Invert Elevation = 881.22	892.96
MH 205	Manhole	P 206, 72" Reinforced Concrete Pipe Invert Elevation = 881.22 P 210, 12" Reinforced Concrete Pipe Invert Elevation = 885.55	P 204, 72" Reinforced Concrete Pipe Invert Elevation = 881.29	892.24
MH 209	Manhole		P 208, 18" Reinforced Concrete Pipe Invert Elevation = 885.50	892.26

Storm Pipe Data Table

Pipe Name	Size and Type	Length	Slope	US IE	DS IE	Start Structure	End Structure
P 102	24" Corrugated HDPE Pipe	30.02'	1.00%	885.37	885.07	CI 103	FES 101
P 104	24" Corrugated HDPE Pipe	168.99'	1.00%	887.06	885.37	AD 105	CI 103
P 106	12" Corrugated HDPE Pipe	85.91'	2.50%	889.21	887.06	CI 107	AD 105
P 108	18" Corrugated HDPE Pipe	62.45'	1.00%	887.68	887.06	CI 109	AD 105
P 110	18" Corrugated HDPE Pipe	158.03'	1.00%	889.26	887.68	AD 113	CI 109
P 114	12" RCP	86.67'	1.00%	890.12	889.26	AD 115	AD 113
P 116	12" Corrugated HDPE Pipe	77.00'	1.18%	890.17	889.26	AD 117	AD 113
P 120	15" Corrugated HDPE Pipe	122.63'	1.00%	888.29	887.06	AD 121	AD 105
P 122	15" Corrugated HDPE Pipe	60.00'	1.00%	888.89	888.29	AD 123	AD 121
P 124	12" Corrugated HDPE Pipe	76.42'	1.00%	889.65	888.89	AD 125	AD 123
P 126	12" Corrugated HDPE Pipe	77.17'	1.00%	890.42	889.65	AD 127	AD 125
P 128	12" RCP	76.42'	0.40%	890.73	890.42	AD 129	AD 127
P 200	72" RCP	190.52'	0.20%	880.79	880.40	MH 201	
P 202	72" RCP	216.24'	0.20%	881.22	880.79	MH 203	MH 201
P 204	72" RCP	87.35'	0.20%	881.29	881.11	MH 205	MH 203
P 206	72" RCP	8.75'	0.20%	881.24	881.22		MH 205
P 208	18" RCP	10.59'	7.08%	885.50	884.75	MH 209	
P 210	12" RCP	23.97'	2.00%	886.03	885.55		MH 205
P 300	12" RCP	34.00'	1.00%	884.94	884.60	FES 301	



SCALE 1" = 40'

40 0 40 80

Existing Legend

- R = RECORDED DIMENSION
- M = MEASURED DIMENSION
- = HANDICAP PARKING SPACE
- = MAG NAIL SET
- = MAG OR P.K. NAIL FOUND
- = CAPPED IRON SET
- = IRON FOUND
- = CHISELED "+" IN CONCRETE
- = CONCRETE MONUMENT FOUND
- = TELEPHONE PEDESTAL
- = ELECTRIC BOX
- = POWER POLE
- = GUY WIRE & ANCHOR
- = LIGHT POLE
- = SIGN
- = POST
- = CATCH BASIN
- = MANHOLE
- = WATER VALVE
- = FIRE HYDRANT
- = FENCE
- = UNDERGROUND GAS
- = CABLE TELEVISION
- = OVERHEAD ELECTRIC
- = UNDERGROUND ELECTRIC
- = UNDERGROUND FIBER OPTIC
- = OVERHEAD TELEPHONE
- = UNDERGROUND TELEPHONE
- = STORM SEWER
- = SANITARY SEWER
- = WATER MAIN
- = LIMITS OF ASPHALT
- = LIMITS OF CONCRETE
- = LIMITS OF GRAVEL

Proposed Legend

- 390 — Existing Contour
- 390 — Proposed Contour
- Grade Break Line
- Swale and Flow Direction
- 895.00 — Existing Spot Elevation
- XXX — Spot Elevation
  - TC: Top of Curb
  - Gut: Gutter
  - EP: Edge of Pavement
  - FL: Flowline
  - ME: Match Existing

Abbreviations

CI, Curb Inlet
AD, Area Drain
MH, Manhole
P, Storm Pipe
FES, Flared End Section
HW, Headwall
DS, Downspouts
YD, Yard Drain
CO, Cleanout

Grading Notes

1. Minimum surface slopes: 0.5% concrete, 0.65% asphalt, 0.8% vegetated. Preferred maximum pavement slope = 5%. Maximum earthwork graded slopes shall be 3:1 unless otherwise noted on plans.
2. All surfaces shall be graded to drain. All grading to slope away from buildings.
3. Maximum cross slopes shall be 2.0% of pedestrian travel paths and landings (sidewalks). Maximum running slope shall be 5.0% longitudinal to travel direction, unless adequate ADA measures provided.
4. Changes in level 1/4 in. or less may be vertical without edge treatment. Changes in level between 1/4 in. and 1/2 in. shall be beveled with a slope no greater than 1:2. Changes in level greater than 1/2 in. shall incorporate a "ramp". Maximum slope on ramp shall be 1:12.
5. Landings shall be incorporated in ramps so that the maximum vertical rise between landings is no greater than 30 inches. Landings shall be a minimum of 60 inches in length and as wide as the ramp (36 inches min.)
6. Landings at a change in direction shall be 60 inches wide and 60 inches long (minimum).
7. Maximum slope in an ADA parking space and its aisle shall be 2.0%.
8. Areas exposed by excavation or stripping and on which subgrade preparations are to be performed shall be scarified to minimum depth of 8" and compacted to minimum of 95% of optimum density, in accordance with ASTM D 698 (or 92% of optimum density, in accordance with ASTM D 1557), at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content. These areas shall then be proofrolled to detect any areas of insufficient compaction, soft and yielding material. Proofrolling shall be accomplished by making a minimum of two (2) complete passes with a fully-loaded tandem-axle dump truck, or approved equivalent, in each longitudinal and perpendicular directions under the supervision and direction of a field geotechnical engineer. Areas of failure shall be excavated and re-compacted as stated above.
9. Fill materials used in preparation of subgrade shall be placed in lifts or layers not to exceed 8" loose measure and compacted to a minimum density of 95% of optimum density, in accordance with ASTM D 698, (or 92% of the optimum density, in accordance with ASTM D 1557) at a moisture content of not less than 1% below and not more than 3% above the optimum moisture content. Contractor to reference any prepared geotechnical reports pertaining to the project site which may call for additional soil preparation.
10. All pipe lengths are measured from center of structure to center of structure. Design pipe slopes are calculated from center of structure to center of structure. Construction pipe slopes may vary slightly if the structure cross slope does not match the design pipe slope.
11. At the close of each working day and at the conclusion of construction operations, all drainage structures and flowlines shall be free from dirt and debris.
12. Any downspouts and roof drains are to be piped to the storm sewer network as shown. Contractor responsible for all proper connection appurtenances to tie downspouts to collector pipe.

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4800 Rosebud Ln., Newburgh, IN 47630
812.464.9585 Phone 812.464.2514 Fax
morleycorp.com

Convenience Store,
Shipshewana, IN

Grading and Drainage Plan

No.	By	Date

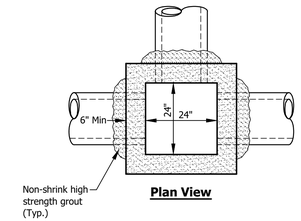
Revisions

Scale: 1" = 40'

Designed By:	Job Number:
AMC	12591.1.001-A
Drawn By:	Date:
AMC	04/05/2024

Filename: 12591 Civil Base

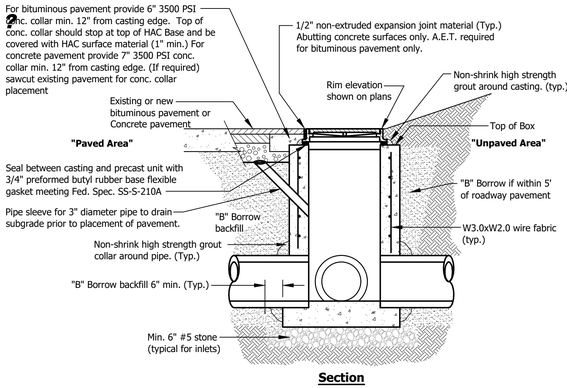
Sheet Number: **C102**



Plan View

Notes:

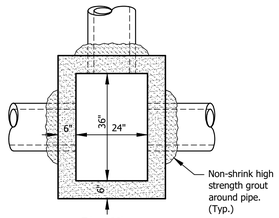
1. For Area Inlet in pavement East Jordan #8306 casting or equal with Type M grate. For Area Inlet in non-paved areas: East Jordan #6500 casting, or equal, with adapter ring.
2. For Manhole East Jordan #8306 casting with Type A solid cover or equal. Contractor may substitute East Jordan #1022-1 casting with Type A solid cover, or equal.
3. All connecting pipes shall be grouted with a high strength non-shrink grout.
4. Precast box shall conform to ASTM C-478.
5. Reinforcement shall be 3" x 6" W3.0xW2.0 wire fabric for precast units.
6. The inlet shall be backfilled with "B" Borrow and mechanically compacted in 6" lifts to 95% of standard density ASTM 698.



Section

24" x 24" Precast Box

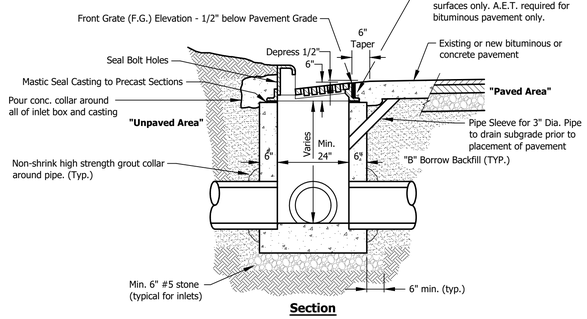
No Scale



Plan View

Notes:

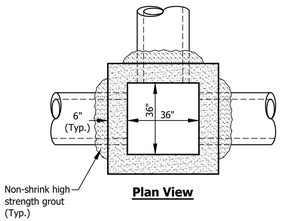
1. East Jordan Iron Works, Inc. (or approved equal) #7030 catch basin curb inlet, with M3 grate for valley inlets or M4 grate for slope inlets.
2. All connecting pipe shall be grouted with a high strength non-shrink grout.
3. Precast units shall conform to ASTM C-478.
4. The inlet shall be backfilled with "B" Borrow and mechanically compacted in 6" lifts to 95% of standard density ASTM-698.



Section

24" x 36" Curb Inlet

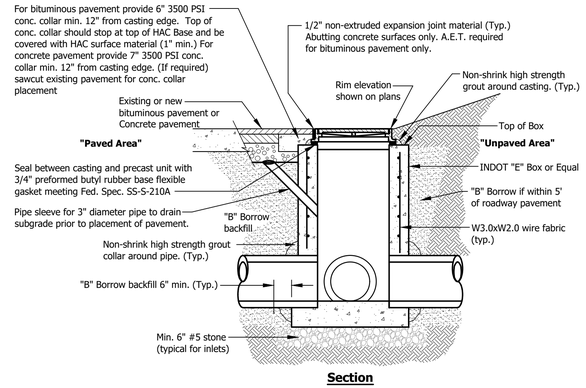
No Scale



Plan View

Notes:

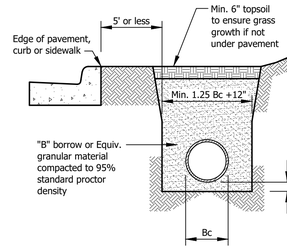
1. For Area Inlet in pavement East Jordan #8315 casting with Type M grate or equal. For Area Inlet in non-paved areas: East Jordan #6610 casting with 6" concrete lid.
2. For Manhole East Jordan #8315 casting with Type M grate cover or equal. Contractor may substitute East Jordan #2996 casting with 8" concrete lid solid cover, or equal.
3. All connecting pipes shall be grouted with a high strength non-shrink grout.
4. Precast box shall conform to ASTM C-478.
5. The inlet shall be backfilled with "B" Borrow and mechanically compacted in 6" lifts to 95% of standard density ASTM 698.



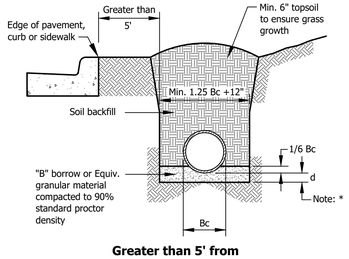
Section

36" x 36" Precast Box

No Scale



Beneath or within 5' of edge of pavement



Greater than 5' from edge of pavement

Depth of Bedding Material Below Pipe

D	(d) Min.
27" & Smaller	3"
30" to 60"	4"
66" & Larger	6"

Legend:

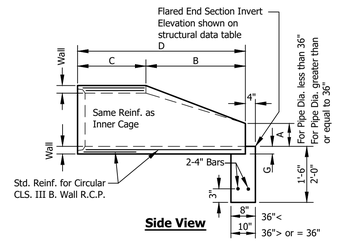
Bc = Outside Diameter
D = Inside Diameter
d = Depth of Bedding Material Below Pipe

Note: *
All bedding & initial backfill shall be Installed in 6" to 12" balanced lifts.

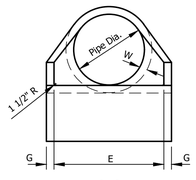
A minimum 9" of clearance shall be provided on each side of the installed pipe.

Reinforced Concrete Pipe Storm Sewer Bedding

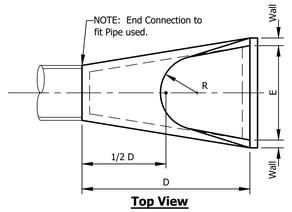
No Scale



Side View



End View



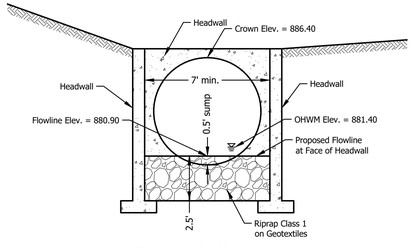
Top View

PIPE DIA.	WGT. (LBS)	WALL	A	B	C	D	E	G	R	SLOPE
12"	530	2 1/4"	8"	2'-1/4"	4'-1 1/2"	6'-1 3/4"	1'-11 3/4"	2 1/4"	9"	2:1
15"	900	2 1/4"	9"	2'-3"	3'-10"	6'-1"	2'-6"	2 1/4"	11"	2:1
18"	1000	2 1/2"	11 1/2"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	1'-0"	2:1
21"	1280	2 3/4"	10"	2'-11"	3'-2"	6'-1"	3'-6"	2 3/4"	1'-1"	2:1
24"	1600	2 3/4"	1'-0"	3'-8"	2'-6"	6'-2"	4'-0"	2 3/4"	1'-2"	2:1
27"	1930	3 1/4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	4'-6"	3 1/4"	1'-2 1/2"	3:1
30"	2250	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3 1/2"	1'-3"	3:1
33"	3200	3 3/4"	1'-1 1/2"	4'-10 1/2"	3'-3 1/4"	8'-1 3/4"	5'-6"	3 3/4"	1'-5 1/2"	3:1
36"	4480	4"	1'-4 3/4"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	4"	1'-8"	3:1
42"	5380	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4 1/2"	1'-10"	3:1
48"	6550	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	5"	1'-10"	3:1
54"	8240	5 1/2"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	5 1/2"	2'-0"	2:1
60"	8730	6"	2'-11"	5'-0"	3'-3"	8'-3"	8'-0"	5"	*	2:1
66"	10710	6 1/2"	2'-6"	6'-0"	2'-3"	8'-3"	8'-6"	5 1/2"	*	2:1
72"	12520	7"	3'-0"	6'-6"	1'-9"	8'-3"	9'-0"	6"	*	1.86:1
78"	14770	7 1/2"	3'-0"	7'-6"	1'-9"	9'-3"	9'-6"	6 1/2"	*	1.82:1
84"	18160	8"	3'-0"	7'-6 1/2"	1'-9"	9'-3 1/2"	10'-0"	6 1/2"	*	1.5:1

Concrete End Section

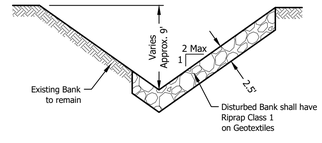
No Scale

RIPRAP TABLE			
Location	AREA (SYS)	RIPRAP CLASS I (CYS)	GEOTEXTILE (SYS)
Downstream of P 200	76	63	76



Section A-A - Headwall

No Scale



Section B-B - Ditch Section

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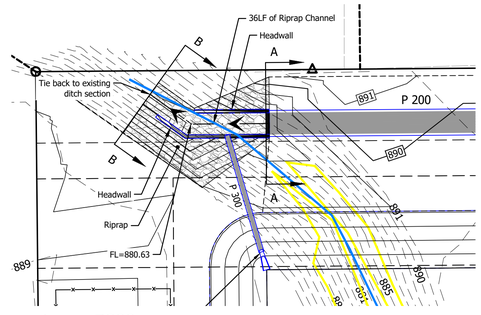

Grading Plan Downstream P200

Scale: 1"=20'

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4800 Rosebud Ln., Newburgh, IN 47630
812.464.9585 Phone 812.464.2514 Fax
morleycorp.com

Convenience Store, Shipshewana, IN

Grading and Drainage Details

No.	By	Date

Revisions

Scale: 1" = 40'

Designed By: AMC	Job Number: 12591.1.001-A
Drawn By: AMC	Date: 04/04/2024
Filename: 12591 Civil Base	
Sheet Number: C502	

Attachment C: Water Resources Delineation Report

April 2024
NW of SR 5 and US HWY 20
LaGrange County, IN

Meristem

Where New Growth Happens

NW of State Road 5 & US Highway 20

LaGrange County, IN

± 3.9 acres

Water Resources Delineation Report

March 18th, 2024

Prepared for:
Shipsy, LLC
Howe, Indiana

Prepared by:

Meristem, LLC
Avon, Indiana

TABLE OF CONTENTS

List of Tables

List of Appendices

1.0 INTRODUCTION

1.1 Introduction

The Study Area is located within Section 15, Township 37 North, and Range 8 East in Newbury Township, LaGrange County, Indiana, south of the Town of Shipshewana (see Appendix A, Figure 1). The Study Area was delineated by Meristem on December 13th, 2023. One (1) emergent wetland (totaling 0.131-acre) and one (1) intermittent stream (totaling 439 linear feet (LF)) were identified and delineated within the Study Area during the investigation. Both water resources appear to have continuous surface connections to traditionally navigable waterways (TNWs) and thus should be considered "waters of the United States" (WOTUS), jurisdictional under the U.S. Army Corps of Engineers (USACE).

1.2 Project Area Description

1.2.1 General Land Use

The Study Area predominantly consists of maintained lawn with 4 residential properties located in the southern region. One intermittent stream (Cotton Lake Ditch) runs through the northern and central regions of the Study Area, and one tree line runs along the western boundary of the Study Area. The Study Area is bounded by State Road 5 to the east and US Highway 20 to the south. Adjacent land use to the south and west predominantly consists of commercial properties with associated maintained lawns and parking lots. Adjacent land use to the north of the Study Area consists of commercial and residential properties, as well as agricultural land. Adjacent land use to the east of the Study Area predominantly consists of agricultural land, commercial properties, and residential neighborhoods.

1.2.2 National Wetland Inventory Mapped Wetlands

The U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) map was reviewed to determine the presence of any NWI polygons within or adjacent to the Study Area. There was one (1) NWI wetland polygon identified within the Study Area (see Appendix A, Figure 2). See Table 1 below for NWI polygons within the Study Area as well as their associated water resources.

Table 1: NWI Polygons within Study Area

NWI Polygon	*Description*	*Number within Study Area*	*Associated Water Resources*
R5UBFx	Riverine, Unknown Perennial, Unconsolidated Bottom, Semipermanently flooded, Excavated	1	Stream 1 (Cotton Lake Ditch)

NWI maps are published by the United States Fish and Wildlife Service (USFWS) to identify potential wetlands and their characteristics. Wetlands published through this service are not always confirmed through field sampling and are not always accurate in identifying water resources.

1.2.3 Topography and Drainage

The Study Area is relatively flat throughout, with greater elevational changes occurring along Stream 1. The lowest point of elevation within the Study Area is approximately 883 feet above sea level (ASL) and is located within Stream 1 (Cotton Lake Ditch). The highest point of elevation is approximately 895 feet ASL and is located in the southern region of the Study Area, near the residential properties (see Appendix A, Figure 3).

1.2.4 Soil Associations and Series Types

The U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey identifies four (4) Soil Mapping Unit types throughout the Study Area. The Study Area is predominantly comprised of the non-hydric Conover loam (CrA) soil series and the non-hydric Oshtemo loamy sand (OsB) soil series. The hydric Rensselaer loam (Rb) soil series occurs in the southernmost region of the Study Area (see Appendix A, Figure 4).

Hydric soils are soils that have formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper layer of the soil. Table 2 below outlines the soil mapping unit types identified within the Study Area.

Table 2: Soil Mapping Units Within the Study Area

Symbol	***Description***	***Hydric***
CrA	Conover loam, 0 to 3 percent slopes	NO
OsA	Oshtemo loamy sand, 0 to 2 percent slopes	NO
OsB	Oshtemo loamy sand, 2 to 6 percent slopes	NO
Rb	Rensselaer loam, 0 to 1 percent slopes	YES

1.2.5 Environmental Protection Agency Level IV Ecoregion

The Study Area is located within the Elkhart Till Plains (56b) Level IV Ecoregion as designated by the U.S. Environmental Protection Agency (EPA). This ecoregion contains more diversity than the Eastern Corn Belt Plains, with end moraines, kames, and lacustrine flats punctuating the landscape. Kettle hole lakes and sand dunes occur but are rarer than surrounding ecoregions. This ecoregion was once dominated by oak-hickory and beech-maple forests, but today agricultural land is more extensive than woodlands.

2.0 REGULATORY BACKGROUND

2.1 Regulatory Agencies

Agencies that regulate impacts to the nation's surface water resources within Indiana include USACE and the Indiana Department of Environmental Management (IDEM). Jurisdictional waters of the U.S. are protected under Sections 401 and 404 of the Clean Water Act (CWA) and Executive Order 11990 (Protection of Wetlands). USACE has the primary regulatory authority for enforcing Section 404 requirements for waters of the U.S., including wetlands. The Indiana Department of Natural Resources (IDNR) also requires permits for impacts to wetlands and waterways within regulated floodways.

2.2 Definitions

2.2.1 Federal

Waters of the U.S. are defined by the USACE, 33 Code of Federal Regulations (CFR) 328.3

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce;
- All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- Tributaries of waters of the U.S. identified above;
- The territorial seas;
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified above. The term adjacent means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by manmade dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

Wetlands are a category of waters of the U.S. and are defined by the USACE as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3, USACE; Section 8b). Typical wetlands include bogs, marshes, swamps, and other similar areas. However, temporarily or seasonally flooded depressions that receive overland storm water runoff or overbank floodwaters can meet the criteria for wetlands. This is often due to the prevalence of clay soils that hold water or have a high water table that causes soils to remain saturated for long periods.

Based upon current guidance by the Environmental Protection Agency (EPA), only those wetlands that are adjacent to traditional navigable waters or wetlands that directly abut to non-navigable tributaries having a seasonal (3-month minimum) flow are now considered jurisdictional under the CWA (June 5, 2007 EPA Memo regarding Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States) Following are key points from the EPA memo and are at times referred to as "Rapanos Guidance".

"The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors"

The EPA finalized a New Rule to define "waters of the United States" (WOTUS) on December 30th, 2022. This new definition, as it specifically relates to jurisdiction, became effective March 20th, 2023. A federal judge in North Dakota blocked implementation of the New Rule in 24 states, including Indiana, as of April 12th, 2023. Subsequent to this stay (block), the U.S. Supreme Court ruled on May 25th, 2023 in favor of Sackett (see Sackett vs. EPA). On September 8th, 2023 the EPA modified the New Rule from December 30th, 2022 to be congruent with the Supreme Court ruling on the Sackett Case.

At the time of this report, the stay on the New Rule, including its modified form, is still in place for multiple states, including Indiana. Our professional opinion of federal jurisdiction as it relates to the features addressed in this report were evaluated consistent with the definition of "waters of the United States" found in the pre-2015 regulatory regime and consistent with the Supreme Court's decision in Sackett v. EPA; and, to the extent applicable, the USACE's December 2nd, 2008 USACE's Headquarters guidance entitled Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States.

Therefore, Local Corps Districts and USACE Project Manager's interpretation may differ from the professional opinion stated within this document.

2.2.2 State

"Waters" within the State of Indiana are defined as surface and underground waterbodies; natural and artificial; public or private, which are partially or wholly within, flow through or border upon Indiana. The term includes all waters of the United States, as defined in Section 502(7) of the federal Clean Water Act (33 U.S.C. 1362(7)), that are located in Indiana. (*As added by P.L.1-1996, SEC.1. Amended by P.L.183-2002, SEC.1; P.L.282-2003, SEC.31; P.L.52-2004, SEC.4.)*

Although not specifically mentioned within the Indiana Code's definition of state "waters", Indiana "waters" do include and are not limited to streams and wetlands (both isolated and non-isolated). State of Indiana "waters" do not include exempt isolated wetlands, private ponds, or off-stream ponds, reservoirs, wetlands, or other facilities ***built for*** reduction or control of pollution or cooling of water before discharge. (IC 13-11-2-265). The State of Indiana also excludes isolated ephemeral streams from their jurisdiction (SEA No. 389: Sect. 7. IC 13-18-22-1, as amended by P.L.166-2020).

The State of Indiana relies on the Corps' (USACE) decision regarding wetland determinations and delineations including whether or not a wetland is isolated or non-isolated.

3.0 DETERMINATION OF WATERS OF THE U.S.

3.1 Methods

3.1.1 Wetlands

The water resources delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the appropriate regional supplement. The presence of potentially jurisdictional wetlands is determined by the positive indication of three criteria: the dominance of hydrophytic (wetland) vegetation, one positive hydric soil indicator, and a minimum of one primary or two secondary indicators for hydrology. A "Wetland Determination Form" was completed for each survey point to record the presence or absence of each criterion.

Wetlands were delineated using a Trimble TDC-600 and/or Trimble R1, and mapped using ArcMap 10.8.2. The final determination on the presence of and jurisdiction of wetlands and "waters of the U.S." is determined by the USACE.

3.2.3.3 Hydrophytic Vegetation

Areal coverage of individual herb, shrub, tree, and vine species were assessed and recorded at each survey point to determine dominance. Plant species are assigned an indicator status based on probability of occurring in wetland conditions regionally. The indicator status of each plant is determined by USACE and is published on the National Wetland Plant List (2020).

Definitions of the five primary indicator statuses are:

Obligate (OBL): Occur almost always under natural conditions in wetlands (estimated > 99% probability of occurrence).

Facultative Wetland (FACW): Usually occur in wetlands but occasionally found in non-wetlands (estimated 67% - 99% probability of occurrence).

Facultative (FAC): Equally likely to occur in wetlands and non-wetlands (estimated 34% - 66% probability of occurrence).

Facultative Upland (FACU): Occasionally occur in wetlands, but usually occur in non-wetlands (estimated 1% - 33% probability of occurrence).

Upland (UPL): Occur almost always under natural conditions in non-wetlands in the region specified. (estimated < 1% probability of occurrence).

3.1.1.2 Hydric Soil

Soil samples were taken in areas believed to be potential wetlands such as areas that are indicated as wetlands on the National Wetland Inventory maps; areas that exhibited wetland flora or had signs of hydrology. These soil samples were taken to determine the presence of hydric soils by examining the hue, value, and chroma of the soil using a Munsell color chart. An upland soil sample was also taken near the edge of the wetlands to determine the boundary and surrounding conditions for the wetland.

3.1.1.3 Wetland Hydrology

Evidence of hydrology can often be associated when the soil sample is dug. Saturated soils within the upper 12 inches is documented in addition to the presence of the water table within 12 inches of the surface. Other signs of hydrology may include but are not limited to drainage patterns, surface water, rafted debris, and crayfish chimneys.

3.1.2 Streams

Potential boundaries for streams were delineated in the field at the ordinary high-water mark (OHWM). The OHWM is the line on the shore or bank established by flowing and/or standing water, marked by characteristics such as a clear, natural line impressed on the bank, erosion shelving, changes in the character of soil, destruction of terrestrial vegetation, presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas [(33 CFR Part 328.3 €].

All waterways with an OHWM were identified as perennial, intermittent, or ephemeral. Determination was made based off field observations, the antecedent precipitation tool (APT) developed by USACE, National Hydrography Dataset (NHD), and other available resources.

3.1.3 Ponds

Water bodies such as lakes, ponds, dammed streams, retention ponds, borrow pits, and similar open water systems are defined by the OHWM near the shoreline or the edge of its littoral fringe.

Ponds lacking vegetation were considered open water systems during the delineation. Ponds that are human made are not considered jurisdictional by USACE.

3.2 Delineation Results

Table 3 below summarizes the characteristics of the water resources delineated.

Table 3: Water Resources Located within the Study Area

Field Name	Water Resource Type[1]	Acreage within Study Area	Linear Feet within Study Area	OHWM Width (feet)	OHWM Depth (inches)	USACE-Jurisdictional	IDEM-Jurisdictional
Wetland A	PEM	0.131	N/A	N/A	N/A	YES	YES
Stream 1 (Cotton Lake Ditch)	INT	N/A	439	2.5	6	YES	YES
Total:		0.131	439	-	-	-	-

[1]INT = Intermittent, PEM = Emergent

3.2.1 Wetlands

A 2022 aerial image of the Study Area is included in Appendix A, Figure 5. There was one (1) emergent wetland identified within the Study Area during the investigation. Multiple representative data points were taken in areas most likely to contain wetland hydrology, soils, and vegetation (see Appendix B).

Wetland A

Wetland A is a 0.131-acre emergent wetland located along Stream 1, Cotton Lake Ditch. Wetland A appears to have a continuous surface connection with traditionally navigable waterways (TNWs), and therefore should be considered a “waters of the United States” (WOTUS), jurisdictional under the U.S. Army Corps of Engineers (USACE). In addition, Wetland A should be considered jurisdictional by the Indiana Department of Environmental Management (IDEM).

- *Vegetation:* Wetland A contained dominant herbaceous species including reed canary grass (*Phalaris arundinacea,* FACW).

  Upland areas adjacent to Wetland A contained dominant herbaceous species including queen anne’s lace (*Daucus carota,* UPL) and red fescue (*Festuca rubra,* FACU).

- *Soils*: Wetland A met the Depleted Below Dark Surface (A11) and Sandy Redox (S5) hydric soil criterion.

- *Hydrology*: The primary hydrology source for this wetland system appeared to be from overland flow from surrounding lawn areas, ground water inputs and flooding from Stream 1, and the potential for input from precipitation. Primary hydrology indicators observed included Saturation (A3). Secondary hydrology indicators observed included Geomorphic Position (D2) and the FAC-Neutral Test (D5).

3.2.2 Streams

One (1) intermittent stream was identified within the Study Area during the investigation.

Stream 1, Cotton Lake Ditch, is an intermittent stream located within the north/ central region of the Study Area. Stream 1 has an ordinary high-water mark (OHWM) width of 2.5 feet and an OHWM depth of 6 inches with a substrate predominantly comprised of silt/sand/mud. Stream 1 enters the Study Area through a culvert in the eastern region of the Study Area and runs northwest for 439 LF before exiting through the northern boundary. After exiting the Study Area, Stream 1 runs northwest for approximately 1 mile before draining into Cotton Lake. Stream 1 appears to have a continuous surface connection with TNWs and therefore should be considered a WOTUS, jurisdictional under the USACE. In addition, Stream 1 should be considered jurisdictional under IDEM.

3.2.3 Ponds

No ponds were identified within the Study Area during the investigation.

4.0 CONCLUSION

4.1 Conclusion

The Study Area is located within Section 15, Township 37 North, and Range 8 East in Newbury Township, LaGrange County, Indiana, south of the Town of Shipshewana. The Study Area was delineated by Meristem on December 13th, 2023. One (1) emergent wetland (totaling 0.131-acre) and one (1) intermittent stream (totaling 439 LF) were identified and delineated within the Study Area during the investigation. Both water resources appear to have continuous surface connections to traditionally navigable waterways (TNWs) and thus should be considered “waters of the United States” (WOTUS), jurisdictional under the U.S. Army Corps of Engineers (USACE).

This report is based on Meristem’s best professional opinion and is limited to the time frame when field work was conducted. Meristem is not responsible for the interpretation or use by others of conclusions described in this report. The U.S. Army Corps of Engineers (USACE) and the Indiana Department of Environmental Management (IDEM) have final determination of wetland boundaries and connectivity to WOTUS.

5.0 BIBLIOGRAPHY

33 CFR 328.3, Definition of Waters of the United States.

Bailey, R.G., Avers, P.E., King, T., and McNab, W.H., eds., 1994, Ecoregions and subregions of the United States (map) (supplementary table of map unit descriptions compiled and edited by McNab, W.H. and Bailey, R.G.): Washington, D.C., U.S. Department of Agriculture - Forest Service, scale 1:7,500,000.

Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe 1985. *Classification of Wetlands and the Deepwater Habitats of the United States.* U.S. Department of the Interior. Fish and wildlife Service, Office of Biological Services, Washington, D.C.

Deam, Charles C. 1940. *Flora of Indiana*. Indiana Department of Conservation.

Deam, Charles C. 1929. *Grasses of Indiana*. Indiana Department of Conservation.

Deam, Charles C. 1932. *Shrubs of Indiana*. Indiana Department of Conservation.

Deam, Charles C. 1921. *Trees of Indiana*. Indiana Department of Conservation.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, Department of the Army, Waterways Experiment Station.

Gleason, Henry A., A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada, Second Edition*. The New York Botanical Press.

Holmgren, Noel H., P. K. Holmgren, A. Cronquist. 1998. Illustrated Companion to Gleason and Cronquist's Manual: Illustrations of the Vascular Plants of Northeastern United States and Adjacent Canada*, Second Edition*. The New York Botanical Press.

Indiana Department of Environmental Management. April 24, 2007. Letter to James Townsend Regarding 2007 Reissuance of Nationwide Permits and Renewal of Regional General Permit for Indiana.

Indiana Senate Enrolled Act No. 389.

IndianaMap Map Viewer. Available online at the following link: https://maps.indiana.edu/.

Natural Resources Conservation Service. 1979. *Soil Survey of LaGrange County*, *Indiana*. U.S. Department of Agriculture, Natural Resources Conservation Service, in cooperation with Iowa Agricultural and Home Economics Experiment Station, and other local agencies.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/.

U.S. Army Corps of Engineers. 2020. National Wetland Plant List Version 3.5.

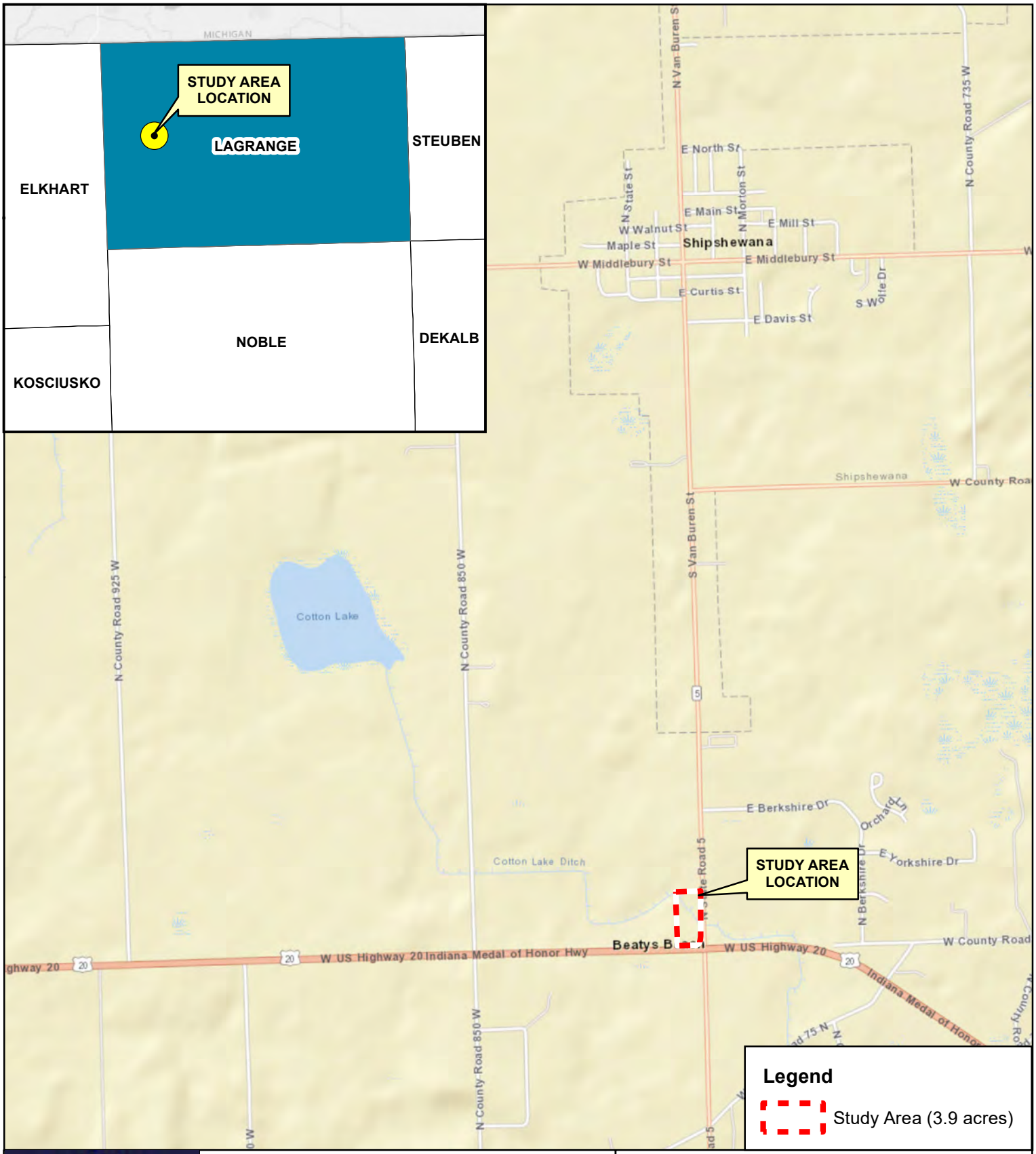
U.S. Army Corps of Engineers. *Reissuance of Nationwide Permits and Final Regional Conditions in Indiana; Public Notice*. March 12, 2007. Federal Register, Vol. 72, No 47, Part II.

U.S. Environmental Protection Agency. *Current Implementation of Waters of the United States.* January 4, 2023. Accessed via internet at https://www.epa.gov/wotus/current-implementation-waters-united-states.

U. S. Fish and Wildlife Service. 2005. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/.

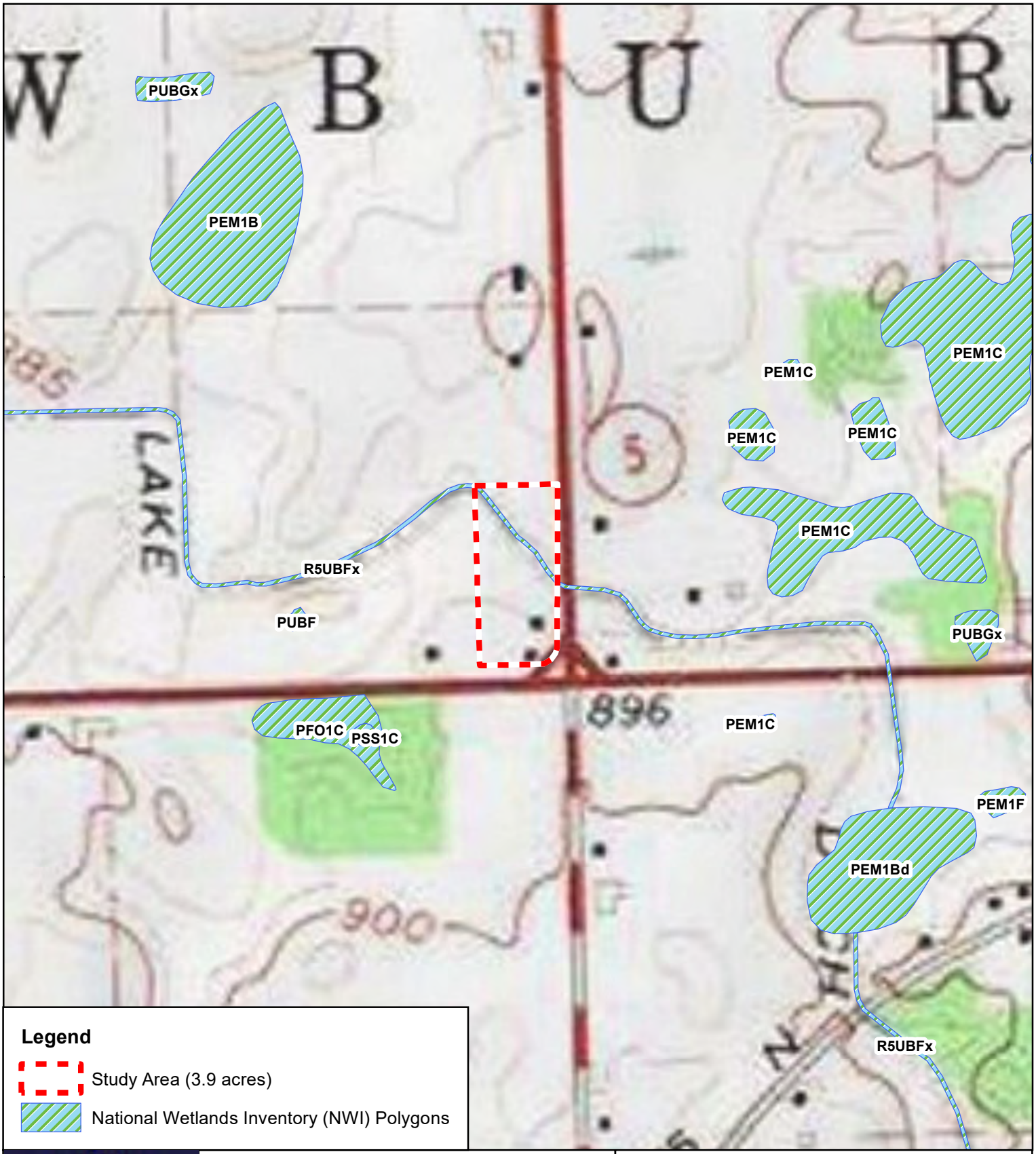
Woods, A.J, Omernik, J.M., Brockman, C.S., Gerber, T.D., Hosteter, W.D., Azevedo, S.H. "Ecoregions of Indiana and Ohio (Poster)", US Geological Survey (1998) Web.

Yatskievych, Kay. 2000. *Field Guide to Indiana Wildflowers*. Indiana University Press.



Appendix A, Figure 1:
Study Area Location Map

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana



National Geographic Society, i-cubed. 2013.
U.S. Fish and Wildlife Service, 2005. National Wetlands Inventory website.
U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.
http://www.fws.gov/wetlands/

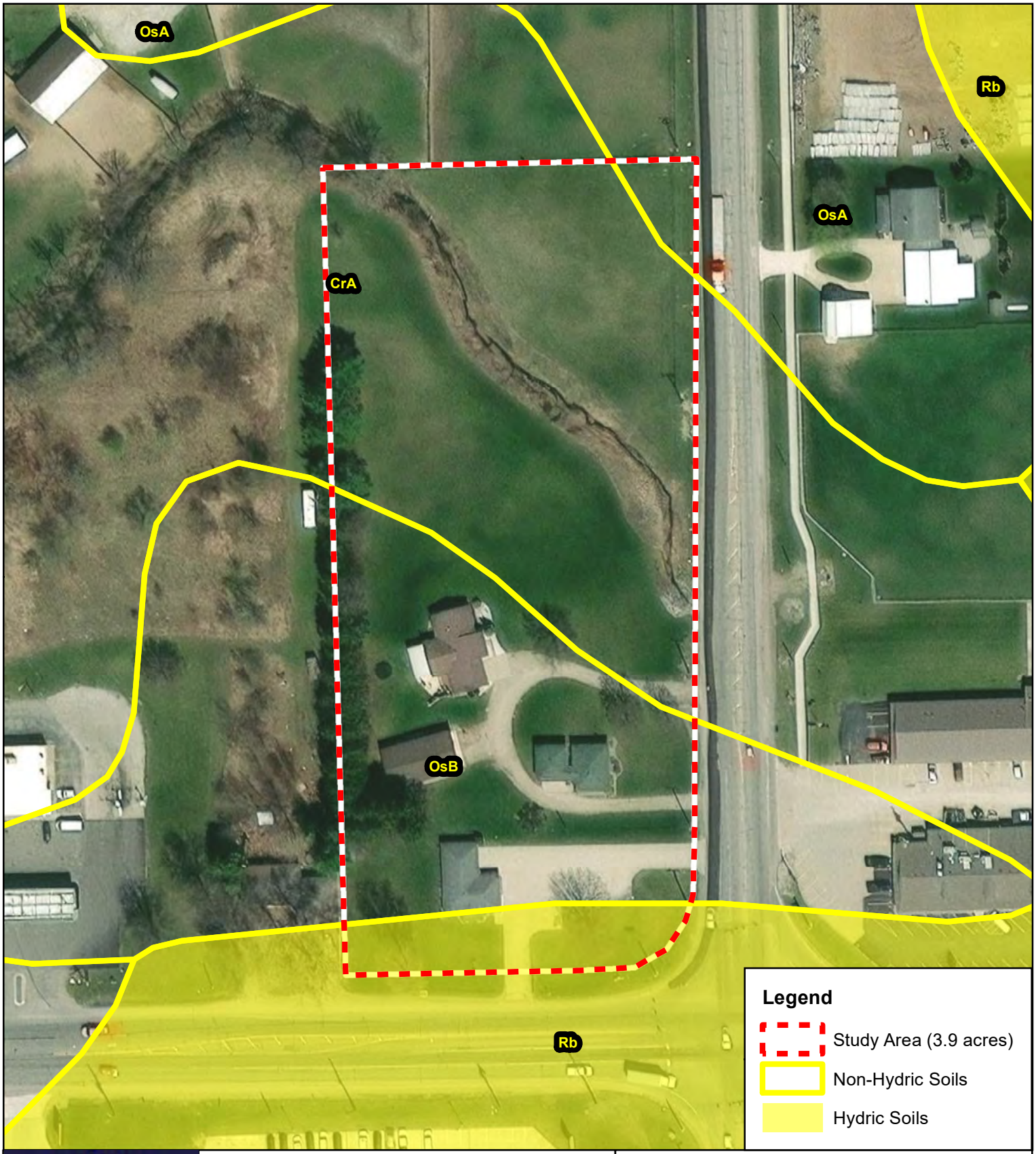
Appendix A, Figure 2:
Topographic and NWI Map

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Imagery Date: 2022

Appendix A, Figure 3:
Study Area on Elevation Map

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana



N

0 50 100 200 Feet

1 in = 100 feet

Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: https://websoilsurvey.sc.egov.usda.gov/.
Imagery Date: 2022

Appendix A, Figure 4:
Study Area on LaGrange Soils Map

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana

N

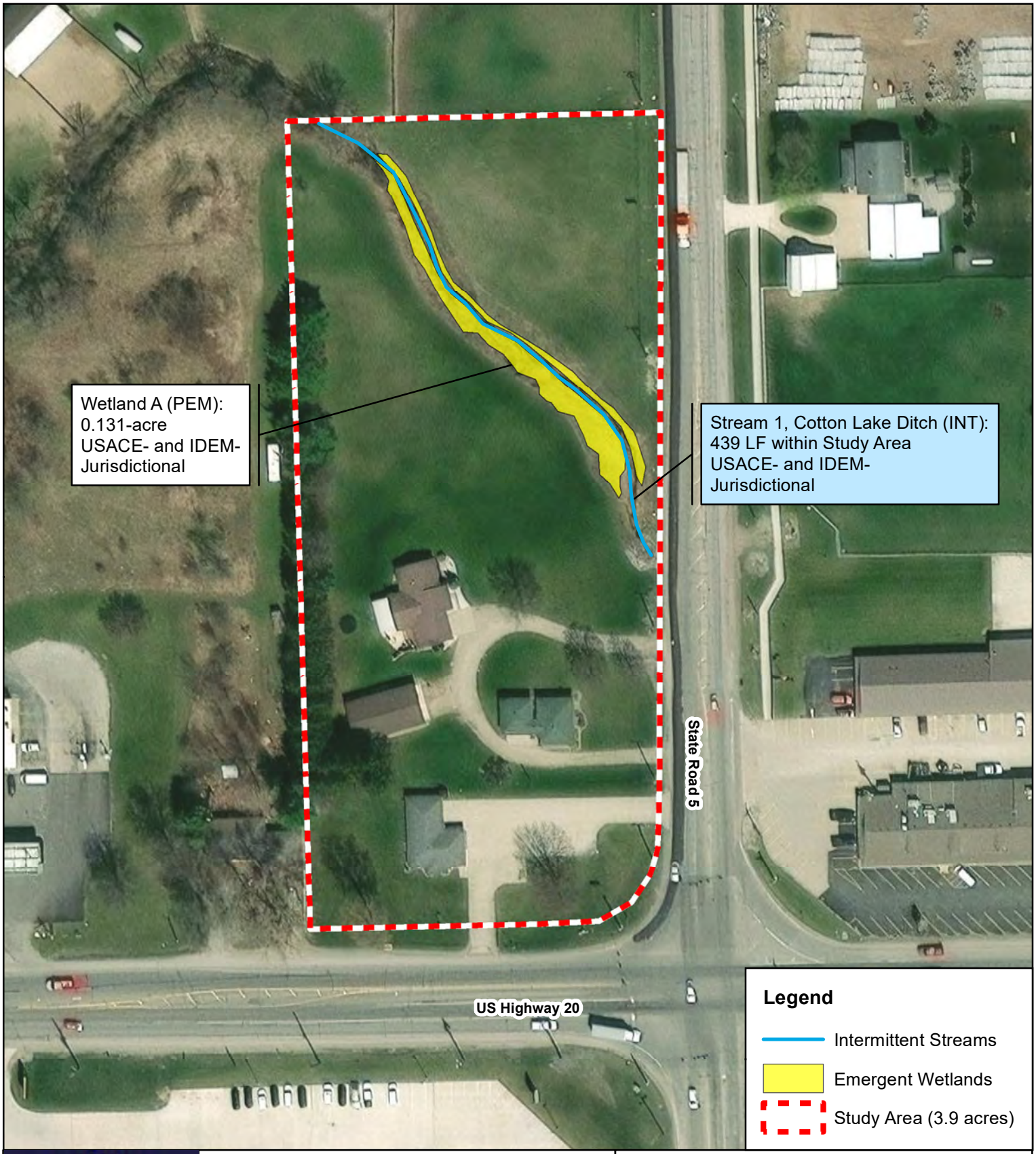
0 50 100 200 Feet

1 in = 100 feet

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Imagery Date: 2022

Appendix A, Figure 5:
Study Area on Aerial Photograph (2022)

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana



N

0 50 100 200 Feet

1 in = 100 feet

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Imagery Date: 2022

Appendix A, Figure 6:
Water Resources Delineation Map

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana

N

0 50 100 200 Feet

1 in = 100 feet

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Imagery Date: 2022

Appendix A, Figure 7:
Photo and Data Point Locations Map

NW of State Road 5 & US Highway 20
Newbury Township
LaGrange County, Indiana

APPENDIX B: Wetland Determination Data Forms (Northcentral and Northeast Region)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: NW of State Road 5 & US Highway 20 City/County: Shipshewana/ LaGrange County Sampling Date: 12/13/2023

Applicant/Owner: Shipsy LLC State: IN Sampling Point: 1

Investigator(s): Kat Pain and Tim Douglas Section, Township, Range: S15, T37N, R8E

Landform (hillside, terrace, etc.): edge of stream bank Local relief (concave, convex, none): none Slope (%): 20%

Subregion (LRR or MLRA): LRR L Lat: 41.6558 Long: -85.580518 Datum: NAD83

Soil Map Unit Name: Conover loam, 0 to 3 percent slopes NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	**Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): >20"
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 4"

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Phalaris arundinacea*	70	Yes	FACW
2. *Solidago canadensis*	8	No	FACU
3. *Cirsium arvense*	3	No	FACU
4. *Symphyotrichum pilosum*	3	No	FACU
5. *Festuca rubra*	3	No	FACU
6. *Verbena urticifolia*	3	No	FAC
7. *Solanum dulcamara*	5	No	FAC
8.			
9.			
10.			
11.			
12.			
	95 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	8	x 3 =	24
FACU species	17	x 4 =	68
UPL species	0	x 5 =	0
Column Totals:	95 (A)		232 (B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy/Clayey	
6-20	10YR 4/1	75	7.5YR 5/6	25	C	PL	Sandy	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: NW of State Road 5 & US Highway 20 City/County: Shipshewana/ LaGrange County Sampling Date: 12/13/2023

Applicant/Owner: Shipsy LLC State: IN Sampling Point: 2

Investigator(s): Kat Pain and Tim Douglas Section, Township, Range: S15, T37N, R8E

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1%

Subregion (LRR or MLRA): LRR L Lat: 41.655847 Long: -85.580702 Datum: NAD83

Soil Map Unit Name: Conover loam, 0 to 3 percent slopes NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	N/A
Water Table Present?	Yes ____	No X	Depth (inches):	>20"
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	>20"

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Daucus carota*	20	Yes	UPL
2. *Solidago canadensis*	10	No	FACU
3. *Plantago lanceolata*	15	No	FACU
4. *Symphyotrichum pilosum*	10	No	FACU
5. *Festuca rubra*	40	Yes	FACU
6. *Setaria viridis*	8	No	UPL
7. *Phalaris arundinacea*	3	No	FACW
8.			
9.			
10.			
11.			
12.			
	106 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	0	x 3 =	0
FACU species	75	x 4 =	300
UPL species	28	x 5 =	140
Column Totals:	106 (A)		446 (B)

Prevalence Index = B/A = 4.21

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? **Yes** ___ **No** X

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

SOIL

Sampling Point: 2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: NW of State Road 5 & US Highway 20 City/County: Shipshewana/ LaGrange County Sampling Date: 12/13/2023

Applicant/Owner: Shipsy LLC State: IN Sampling Point: 3

Investigator(s): Kat Pain and Tim Douglas Section, Township, Range: S15, T37N, R8E

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1%

Subregion (LRR or MLRA): LRR L Lat: 41.656264 Long: -85.580722 Datum: NAD83

Soil Map Unit Name: Conover loam, 0 to 3 percent slopes NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____ No X	Depth (inches):	N/A
Water Table Present?	Yes ____ No X	Depth (inches):	>20"
Saturation Present? (includes capillary fringe)	Yes ____ No X	Depth (inches):	>20"

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Daucus carota*	10	No	UPL
2. *Bromus inermis*	20	No	UPL
3. *Plantago lanceolata*	10	No	FACU
4. *Cirsium arvense*	8	No	FACU
5. *Festuca rubra*	30	Yes	FACU
6. *Schedonorus arundinaceus*	25	Yes	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	103 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	73	x 4 =	292
UPL species	30	x 5 =	150
Column Totals:	103 (A)		442 (B)

Prevalence Index = B/A = 4.29

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? **Yes** ___ **No** X

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

SOIL Sampling Point: 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	100					Loamy/Clayey	
7-20	10YR 3/2	48	7.5YR 5/6	2	C	PL	Loamy/Clayey	Mixed Matrix 7-20"
	10YR 4/3	48	7.5YR 5/6	2	C	PL		Loamy/Clayey, Mixed Matrix 7-20"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: NW of State Road 5 & US Highway 20 City/County: Shipshewana/ LaGrange County Sampling Date: 12/13/2023

Applicant/Owner: Shipsy LLC State: IN Sampling Point: 4

Investigator(s): Kat Pain and Tim Douglas Section, Township, Range: S15, T37N, R8E

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1%

Subregion (LRR or MLRA): LRR L Lat: 41.655938 Long: -85.581096 Datum: NAD83

Soil Map Unit Name: Conover loam, 0 to 3 percent slopes NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	N/A
Water Table Present?	Yes ____	No X	Depth (inches):	>20"
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	>20"

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 4

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Symphyotrichum pilosum*	5	No	FACU
2. *Agrostis gigantea*	8	No	FACW
3. *Plantago lanceolata*	15	No	FACU
4. *Schedonorus arundinaceus*	25	Yes	FACU
5. *Festuca rubra*	30	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	83 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	8	x 2 =	16
FAC species	0	x 3 =	0
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	83 (A)		316 (B)

Prevalence Index = B/A = 3.81

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? **Yes** ___ **No** X

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

SOIL Sampling Point: 4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

APPENDIX C: Study Area Photographs

Appendix C:
Study Area Photographs

DP1, Looking north (12/13/23)

DP1, Looking east (12/13/23)

DP1, Looking south (12/13/23)

DP1, Looking west (12/13/23)

DP2, Looking north (12/13/23)

DP2, Looking east (12/13/23)

Appendix C:
Study Area Photographs

DP2, Looking south (12/13/23)

DP2, Looking west (12/13/23)

DP3, Looking north (12/13/23)

DP3, Looking east (12/13/23)

DP3, Looking south (12/13/23)

DP3, Looking west (12/13/23)

Appendix C:
Study Area Photographs

DP4, Looking north (12/13/23)

DP4, Looking east (12/13/23)

DP4, Looking south (12/13/23)

DP4, Looking west (12/13/23)

PP1, Looking north (12/13/23)

PP1, Looking east (12/13/23)

Appendix C:
Study Area Photographs

PP1, Looking south (12/13/23)

PP1, Looking west (12/13/23)

PP2, Looking north (12/13/23)

PP2, Looking east (12/13/23)

PP2, Looking south (12/13/23)

PP2, Looking west (12/13/23)

Appendix C:
Study Area Photographs

PP3, Looking north (12/13/23)

PP3, Looking east (12/13/23)

PP3, Looking south (12/13/23)

PP3, Looking west (12/13/23)

PP4, Looking north (12/13/23)

PP4, Looking east (12/13/23)

Appendix C:
Study Area Photographs

PP4, Looking south (12/13/23)

PP4, Looking west (12/13/23)

PP5, Looking at Stream 1 culvert (12/13/23)

PP5, Looking at outlet into Stream 1 (12/13/23)

PP6, Looking up Stream 1 (12/13/23)

PP6, Looking down Stream 1 (12/13/23)

Appendix C:
Study Area Photographs

PP7, Looking up Stream 1 (12/13/23)

PP7, Looking down Stream 1 (12/13/23)

PP8, Looking north (12/13/23)

PP8, Looking east (12/13/23)

PP8, Looking south (12/13/23)

PP8, Looking west (12/13/23)

Appendix C:
Study Area Photographs

PP9, Looking north (12/13/23)

PP9, Looking east (12/13/23)

PP9, Looking south (12/13/23)

PP9, Looking west (12/13/23)

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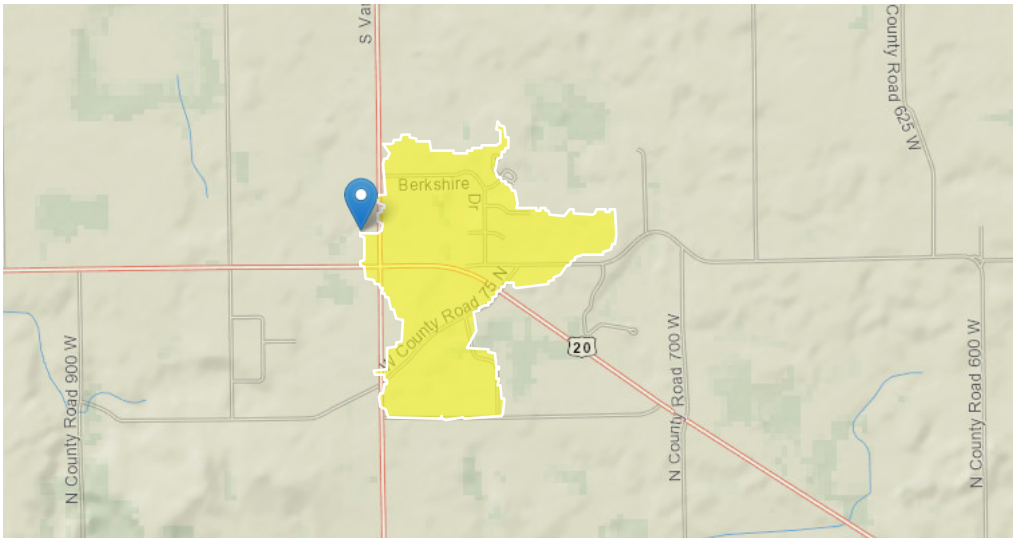
StreamStats Report

Region ID: IN
Workspace ID: IN20240419185832786000
Clicked Point (Latitude, Longitude): 41.65626, -85.58152
Time: 2024-04-19 14:58:56 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	0.422	square miles

Application Version: 4.20.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1