

WETLAND DELINEATION REPORT
ON THE
U.W. BOARD OF REGENTS & CITY OF MARSHFIELD PROPERTY

CITY OF MARSHFIELD
WOOD COUNTY
WISCONSIN

Prepared for:

Mr. Daniel Knoeck
Director of Public Works
City of Marshfield
207 W 6th Street
Marshfield, WI 54449

December 28, 2020

Prepared by:

GARY W. STARZINSKI
LICENSED PROFESSIONAL SOIL SCIENTIST
PROFESSIONAL WETLAND DELINEATOR
STAR ENVIRONMENTAL, INC.
(715) 443-6115
Fax: (715)443-6108
starencironmental@hotmail.com



705 Third Street
P.O. Box 434
Marathon, WI 54448
(715) 443-6115 – FAX: 1-715-443-6108
Email: starenvironmental@hotmail.com

December 28, 2020

Mr. Kyle Zibung
U.S. Army Corps of Engineers
2926 Post Road, Suite B
Stevens Point, WI 54481

RE: Wetland Delineation on the U.W. Board of Regents & City of Marshfield Property, located in the SW1/2 and the SE1/2, Section 15, T.25N.-R.3E. and the City of Marshfield Property, located in the NW1/4, Section 22, T.25N.-R.3E. City of Marshfield, Wood County, Wisconsin.

Dear Mr. Zibung,

Our client, Mr. Daniel Knoeck, Director of Public Works, requested this Wetland Delineation, to determine the wetland boundary and the extent of wetlands at this site.

Enclosed are copies of the Wetland Delineation Report and onsite photos. The wetlands have been documented, the boundary flagged and surveyed.

Upon review of the enclosed report, onsite photos and wetland map, please certify the Wetland Delineation Map, indicate your opinion, the U.S. Army Corps of Engineers jurisdiction on the wetlands and any requirements to allow the land development of this given property.

If you have any questions or comments, please call me. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary W. Starzinski".

Gary W. Starzinski
Licensed Professional Soil Scientist
Professional Wetland Delineator
STAR ENVIRONMENTAL, INC.

Enclosures

cc: Mr. Daniel Knoeck, Director of Public Works
cc: Wisconsin DNR



705 Third Street
P.O. Box 434
Marathon, WI 54448
(715) 443-6115 – FAX: 1-715-443-6108
Email: starenvironmental@hotmail.com

December 28, 2020

Mr. Daniel Knoeck
Director of Public Works
City of Marshfield
207 W 6th Street
Marshfield, WI 54449

RE: Wetland Delineation on the U.W. Board of Regents & City of Marshfield Property, located in the SW1/2 and the SE1/2, Section 15, T.25N.-R.3E. and the City of Marshfield Property, located in the NW1/4, Section 22, T.25N.-R.3E. City of Marshfield, Wood County, Wisconsin.

This Wetland Delineation Report, which you requested, has been completed and forwarded to Mr. Kyle Zibung, U.S. Army Corps of Engineers for his review and approval.

Wetlands present at this site should be protected from filling, grading or draining. Permits from the U.S. Army Corps of Engineers and WDNR are required, if any of the wetlands are going to be impacted.

If you have any further questions or concerns on this Wetland Delineation, please call me. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary W. Starzinski".

Gary W. Starzinski
Licensed Professional Soil Scientist
Professional Wetland Delineator
STAR ENVIRONMENTAL, INC.

Enclosures

cc & cc: Mr. Kyle Zibung, U.S. Army Corps of Engineers
cc: Wisconsin DNR



US Army Corps
of Engineers
St. Paul District

Request for Corps of Engineers Wetland Delineation Review

Please enter the following general information about the property under review:

| | |
|---|-------------------------------------|
| Name of property owner City of Marshfield & U.W. Board of Regents | |
| Property Address (No. & Street, City, State, Zip Code) East Yellowstone Drive, Marshfield, WI 54449 | |
| Lat. ° <input type="text"/> | Long. ° <input type="text"/> |
| County Wood | |
| Location: SW1/2 & SE1/2 & NW1/4 Section 15 & 22 Township 25N Range 3E | |
| Size of review areas: ± 145 acre(s) | |

By submission of this wetland delineation report I am requesting that the U.S. Army Corps of Engineers, St. Paul District provide me with the following (check only one box):

☒ **Wetland Delineation Concurrence.** Concurrence with a wetland delineation is a written notification from the Corps concurring, not concurring, or commenting on the wetland boundaries delineated on a property. Under this request, the Corps will not address the jurisdictional status of the wetlands on the property, only the boundaries of the resources within the review area.

☐ **Preliminary Jurisdictional Determination.** Preliminary Jurisdictional Determination. A preliminary jurisdictional determination is a nonbinding written indication that there may be waters of the United States, including wetlands, on a parcel or indications of the approximate location(s) of waters of the United States or wetlands on a parcel. For purposes of computation of impacts and compensatory mitigation requirements a permit decision made on the basis of a preliminary jurisdictional determination will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. Preliminary jurisdictional determinations are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination.** An approved jurisdictional determination is an official Corps determination that jurisdictional waters of the United States or navigable waters of the United States, or both, are either present or absent on the property. An approved jurisdictional determination precisely identifies the limits of those waters on the project site determined to be jurisdictional under the Clean Water Act or Rivers and Harbors Act. Approved jurisdictional determinations can be relied upon by the affected party for a period of five years. An approved jurisdictional determination may be appealed through the Corps' administrative appeal process.

In order for the Corps to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the Guidelines for Submitting Wetland Delineations in Minnesota and Wisconsin (<http://www.mvp.usace.army.mil/regulatory/>).

Requestor 

Date: December 23, 2020

Name (typed) Gary W. Starzinski

WETLAND DELINEATION CONFIRMATION REQUEST CHECK LIST

WDNR WETLAND IDENTIFICATION PROGRAM

The following is the preferred order for all information provided in wetland delineation reports submitted for wetland confirmation. Please include this completed checklist with all wetland delineation report submittals. All of the following must be included with all wetland delineation reports that are submitted for confirmation:

✓

Introductory Section

- Why the delineation was undertaken
- Date the field work was completed
- Who conducted field work
- Qualifications

✓

Methods used during the wetland delineation

- Description of methods
- Sources Reviewed (WWI mapping, Soil Survey, etc.)
- Description of any site specific agency guidance (site meetings, etc.)

✓

Results and Discussion

- Antecedent hydrologic condition analysis
- Previous wetland delineation mapping
- Existing environmental mapping (WWI mapping, Soil survey, etc.)
- Amount and types of wetland located within the project area
- Discussion explaining how the wetland/upland boundary was differentiated
- Disturbed and problematic areas encountered during the delineation
- Other water resources located in the project area (navigable streams, etc.)

✓

Topographic mapping (Include map scale, clearly identified review area, a north arrow)

✓

WWI mapping (Include map scale, clearly identified review area, a north arrow)

✓

Soil Survey mapping (Include map scale, clearly identified review area, a north arrow)

✓

Wetland Delineation Map showing an accurate depiction of wetland boundaries and data points identified during field investigation (Include map scale, clearly identified review area, a north arrow)

✓

Complete, legible wetland delineation **data forms** from the appropriate regional supplement

✓

Site photos

✓

Any previous delineation information

✓

Areas that are currently, or were recently (less than three years prior to the delineation) under agricultural production must include a Farm Service Agency (FSA) Slide Review. All FSA Slide Reviews should include the following:

- Copies or photos of slides if available
- A completed wetland documentation form (NRCS form NRCS-CPA-32W)
- A copy of the draft NRCS Wetland Inventory map if available

✓

Literature Cited

Please include this completed checklist with all wetland delineation report submittals.

**WETLAND DELINEATION REPORT
ON THE
U.W. BOARD OF REGENTS & CITY OF MARSHFIELD PROPERTY**

Table of Contents

| | |
|-------------------------------|---|
| Introduction | 1 |
| Methods..... | 1 |
| Results and Discussions | 2 |
| Conclusion..... | 2 |
| References Cited | 4 |

Attachment 1 – Project Site Maps

- Figure 1 – Location Map
- Figure 2 – USDA-NRCS Web Soil Survey Map
- Figure 3 – USDA-NRCS Web Soil Survey Legend
- Figure 4 – Surface Water Data Viewer Wetland Map
- Figure 5 – Wood County Topographic Map (10' Contour)
- Figure 6 – Wetland Delineation Map
- Figure 7 – Aerial Overlay Wetland Delineation Map

Attachment 2 – Plant List

Attachment 3 – Wetland Data Forms

Attachment 4 – USDA-NRCS WETS Tables

- Table 1 – USDA Field Office Climate Data – WETS Table
- Table 2 – USDA Field Office Climate Data – 2020 Monthly Results of Precipitation
- Table 3 – USDA Field Office Climate Data – One Week Precipitation
- Table 4 – Hydrologic Determination

Attachment 5 – Onsite Photos

Attachment 6 – Offsite Aerial Photo Review

Attachment 7 – Previous Wetland Delineation Information

Attachment 8 – Resume'

WETLAND DELINEATION REPORT ON THE U.W. BOARD OF REGENTS & CITY OF MARSHFIELD PROPERTY

Introduction

The wetland delineation was undertaken to verify the presence of wetlands on the U.W. Board of Regents & City of Marshfield Property located in the SW1/2 and the SE1/2, Section 15, T.25N.-R.3E. and in the NW1/4, Section 22, T.25N.-R.3E., City of Marshfield, Wood County, Wisconsin. The project boundary study area is approximately 145 acres in size.

On October 28, November 4 and November 11, 2020, Mr. Gary W. Starzinski, Professional Wetland Delineator, Star Environmental, Inc. completed the wetland delineation. Mr. Alex Blume and Mr. Dalton E. Lehman assisted in data collection and site mapping. The purpose of the wetland delineation was to determine the presence of wetlands for future commercial developments at this site. "Green-up" was present at the time of the delineation indicating the growing season is still present and an accurate boundary delineated.

The field work was completed by the lead field investigator and report author, Gary W. Starzinski, Star Environmental, Inc. Mr. Starzinski is a State of Wisconsin-Licensed Professional Soil Scientist, American Registry of Certified Professionals in Agronomy Crops and Soils (ARCPACS), Certified Professional Soil Scientist (CPSS) and Recognized United States Army Corps of Engineering (USACE) and Wisconsin Department of Natural Resources (WDNR) Wetland Delineator. Mr. Starzinski has over 45 years of professional experience in the soils and wetland disciplines, completing over 2000 wetland delineations in over 50 Wisconsin Counties. He has soil mapped over 200,000 acres on the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) National Cooperative Soil Survey and participates in Wetland Training programs, annually. (Attachment 8)

Methods

Wetland Delineation techniques and criteria for evaluation follow the United States Army Corps of Engineers (USACE) 1987 "Corps of Engineers Wetlands Delineation Manual" and the Northcentral & Northeastern Regional Supplement guidelines.

Wetland boundaries were identified utilizing procedures described in the 1987 Army Corps of Engineers Wetland Delineation Manual and Northcentral and Northeast Regional Supplement. The three-parameter approach was used to identify wetland areas based on topography, upland/wetland vegetation, hydrology indicators and hydric soil presence. Wetland data forms are included in Attachment 3.

The project boundary was established by Mr. Daniel Knoeck, Director of Public Works and is shown on the project maps (Attachment 1, Figure 1). The property was subjected to a preliminary survey using WDNR Wetland Inventory (WWI) mapping, USDA-NRCS web soil survey, topographic mapping and aerial GIS maps.

A Wetland Determination Data Form (WDDF) was completed for each sample plot. Using the data from all sample plots, the wetland boundary was delineated with flagging. A Geographic Positioning System (GPS) was utilized to locate the delineated wetland boundary.

Additionally, as climate plays an important role in the formation and identification of wetlands, the antecedent precipitation in the months leading up to the field investigations was reviewed. The current year's precipitation data was compared to long-term (30-year) precipitation averages and standard deviation to determine if precipitation was normal, wet, or dry for the area using a USDA-NRCS Wetland Evaluation Table Station (WETS) analysis.

Off-Site Review

Prior to the onsite review, the WDNR SWDV map, Wood County Topographic Map, USDA-NRCS Web Soil Survey and any other available aerial GIS photos were reviewed.

Results and Discussions

The WDNR SWDV map (Attachment 1, Figure 4) indicates the potential for wetlands on this property. Wetlands that were present onsite would be identified as T3K/E1K (Forested, Broad-leaved deciduous, Wet soil, Palustrine/Emergent/wet meadow, Persistent, Wet soil, Palustrine) or E2Kg (Emergent/wet meadow, Narrow-leaved persistent, Wet soil, Palustrine, Grazed).

The Wood County Topographic Map (2-Foot Contour) shows the site to have a sloping landscape that slopes from the west to the east. The apex of the uplands is at 1,260 feet above sea level on the western portion of the site and goes downslope towards the east to a low site elevation of approximately 1,225 feet.

The USDA-NRCS Web Soil Survey indicates the presence of the somewhat poorly drained, non-hydric Withee Soil Series, an Aquic Glossudalf and the poorly drained, hydric Marshfield Soil Series, a Mollic Epiaqualf. Both series consist of silty deposits over loamy glacial till. Areas of past grading have occurred in the cropped fields. These areas were terraced for experimental purposes for the UW Madison Agriculture program. Additionally, irrigations systems were installed and access drives are present throughout the site. Grassy swales that may shed water off the landscape but lack wetland hydrology, vegetation or soils are also present and were artificially created for agricultural purposes. See the attached wetland delineation map for reference.

An antecedent precipitation evaluation was conducted prior to the site visit. The USDA-NRCS WETS analysis indicates that precipitation is 1.85 inches below average for the months of January thru September 2020. Total precipitation one week prior to the wetland delineation was 1.41 inches (Attachment 4, Table 3). The analysis by the USDA-NRCS method shows that the hydrologic determination is normal (Attachment 4, Table 4).

On-Site Review

There were 10 separate wetland areas or wetland vegetation types found and delineated at this site. The wetland boundaries were identified using procedures in the 1987 Corp of Engineers Wetlands Delineation Manual and Northcentral and Northeast Regional Supplement, including observations of wetland hydrology, vegetation and soils, as well as landscape position.

There were three separate onsite reviews completed at this site to finalize all wetland boundaries. The initial site review was completed on October 28, 2020. Two additional site reviews were completed to gather further site information at sample points.

Wetland Areas 1, 2, 3, 4, 5, 7, 8, 9 and 10: Degraded Sedge Meadow Plant Community

Wetland sample points A-2, B-2, C-2, D-2, E-2, F-2, G-2, H-2 and S-5 would be classified as a Hardwood Swamp Plant Community dominated by either *Phalaris arundinacea* (Reed Canary Grass), *Setaria pumilla* (Yellow Bristle Grass) or has a cut corn crop present. The landscape position or wetland hydrology is concave or a depression with zones of soil saturation at 0 to 6 inches with a perched water table observed at 2 to 12 inches and redoximorphic features present to the surface. Soils are hydric consisting of silty deposits over loamy glacial till. Adjacent upland areas or sample points A-1, B-1, C-1, D-1, E-1, F-1, G-1, H-1 and S-4 have a convex landscape position and non-hydric soils dominated by either a cut corn crop or winter wheat field. Sample point G-1 is located in an upland, graded swale to shed upslope stormwater off the landscape. Wetland Area 7 has 2.56 acres dug pond present within the vegetative wetland boundary. Narrowleaf cattail and reed canary grass are present along the edge of the pond.

| Sample Points | Hydrology Indicators (Primary) | Hydrology Indicators (Secondary) | Dominant Vegetation | Soils |
|---|--|---|---|--|
| A-2, B-2, C-2, D-2, E-2, F-2, G-2, H-2, S-5 | High Water Table (A2) Saturation (A3) | Geomorphic Position (D2) FAC-Neutral Test (D5) Microtopographic Relief (D4) | Reed Canary Grass Yellow Bristle Grass | Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) |

Wetland Area 6: Hardwood Swamp Plant Community

No sample points were taken in this wetland area but pictures were taken for reference. The wetland area is mostly dominated by *Acer rubrum* (Red Maple) and *Populus tremuloides* (Quaking Aspen).

| Wetland ID | Wetland Type | Wetland Area (Sq.ft. or Ac.) |
|-----------------|-----------------------|------------------------------|
| Wetland Area 1 | Degraded Sedge Meadow | 0.66 Acres |
| Wetland Area 2 | Degraded Sedge Meadow | 8,041 Square Feet |
| Wetland Area 3 | Degraded Sedge Meadow | 4,515 Square Feet |
| Wetland Area 4 | Degraded Sedge Meadow | 6,542 Square Feet |
| Wetland Area 5 | Degraded Sedge Meadow | 0.39 Acres |
| Wetland Area 6 | Hardwood Swamp | 4.79 Acres |
| Wetland Area 7 | Degraded Sedge Meadow | 3.84 Acres |
| Wetland Area 8 | Degraded Sedge Meadow | 10.31 Acres |
| Wetland Area 9 | Degraded Sedge Meadow | 1.07 Acres |
| Wetland Area 10 | Degraded Sedge Meadow | 0.79 Acres |

Conclusion

On October 28, November 4 and November 11, 2020, Mr. Gary W. Starzinski, Professional Wetland Delineator, Star Environmental, Inc. completed the wetland delineation. Mr. Alex Blume and Mr. Dalton E. Lehman assisted in data collection and site mapping. The purpose of the wetland delineation was to determine the presence of wetlands for future commercial developments at this site. "Green-up" was present at the time of the delineation indicating the growing season is still present and an accurate boundary delineated.

This Wetland Delineation Report indicates that multiple Degraded Sedge Meadow Plant Communities and a Hardwood Swamp Plant Community exist on this property. The total area of wetlands present in the project boundary is 22.29 acres.

Wetland areas should be protected from filling, grading, and mechanically removing woody stumps.

This Wetland Delineation Report should be beneficial in providing important information for the land improvements on this given project.

The final wetland authority rests with the appropriate regulatory agencies: U.S. Army Corps of Engineers, the WDNR and the local zoning officials.

This report, conclusion and recommendations are the professional opinion of Gary W. Starzinski, Licensed Professional Soil Scientist and Professional Wetland Delineator.



Gary W. Starzinski, Licensed Professional Soil Scientist,
Professional Wetland Delineator

December 28, 2020
Date



References Cited

1. *Peterson and McKenny. 1968.
A Field Guide to Wildflowers of Northeastern and Northcentral
North America. 420 pp.*
2. *United States Army Corps of Engineers. 1987.
Corps of Engineers Wetlands Delineation Manual*
3. *United States Army Corps of Engineers. 1987.
Wetland Plants and Plant Communities of Minnesota
and Wisconsin. 201 pp.*
4. *United States Department of Agriculture.
Soil Survey of Wood County Wisconsin.
and appendices and maps.*
5. *United States Department Army Corps of Engineers,
State of Wisconsin 2016 Wetland Plant List. 26 pp*
6. *United States Army Corps of Engineers. 2012.
Regional Supplement to the Corps of Engineers Wetlands Delineation Manual:
Northcentral and Northeast Region.*
7. *United States Army Corps of Engineers. 2015.
Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps
of Engineers and the Wisconsin Department of Natural Resources.*
8. *United States Army Corps of Engineers. 2018
Field Indicators of Hydric Soils in the United States.
A Guide for Identifying and Delineating Hydric Soils, Version 8.2, 44pp*

ATTACHMENT 1

PROJECT SITE MAPS

Figure 1 – Location Map

Figure 2 – Wood County Soil Survey Map

Figure 3 – Wood County Soil Survey Legend

Figure 4 – Surface Water Data Viewer Wetland Map

Figure 5 – Wood County Topographical Map (2' Contour)

Figure 6 – Wetland Delineation Map

Figure 7 – Aerial Overlay Wetland Delineation Map



Location Map

Disclaimer: This Map is NOT a Survey!!!

No information on this website is intended to serve as legal evidence of size, shape, location or ownership of real estate or environmental features including floodplains and wetlands. Wood county assumes no liability related to the use of this map. Property types open to the public for hunting should ALWAYS be verified by the Treasurer's Office.



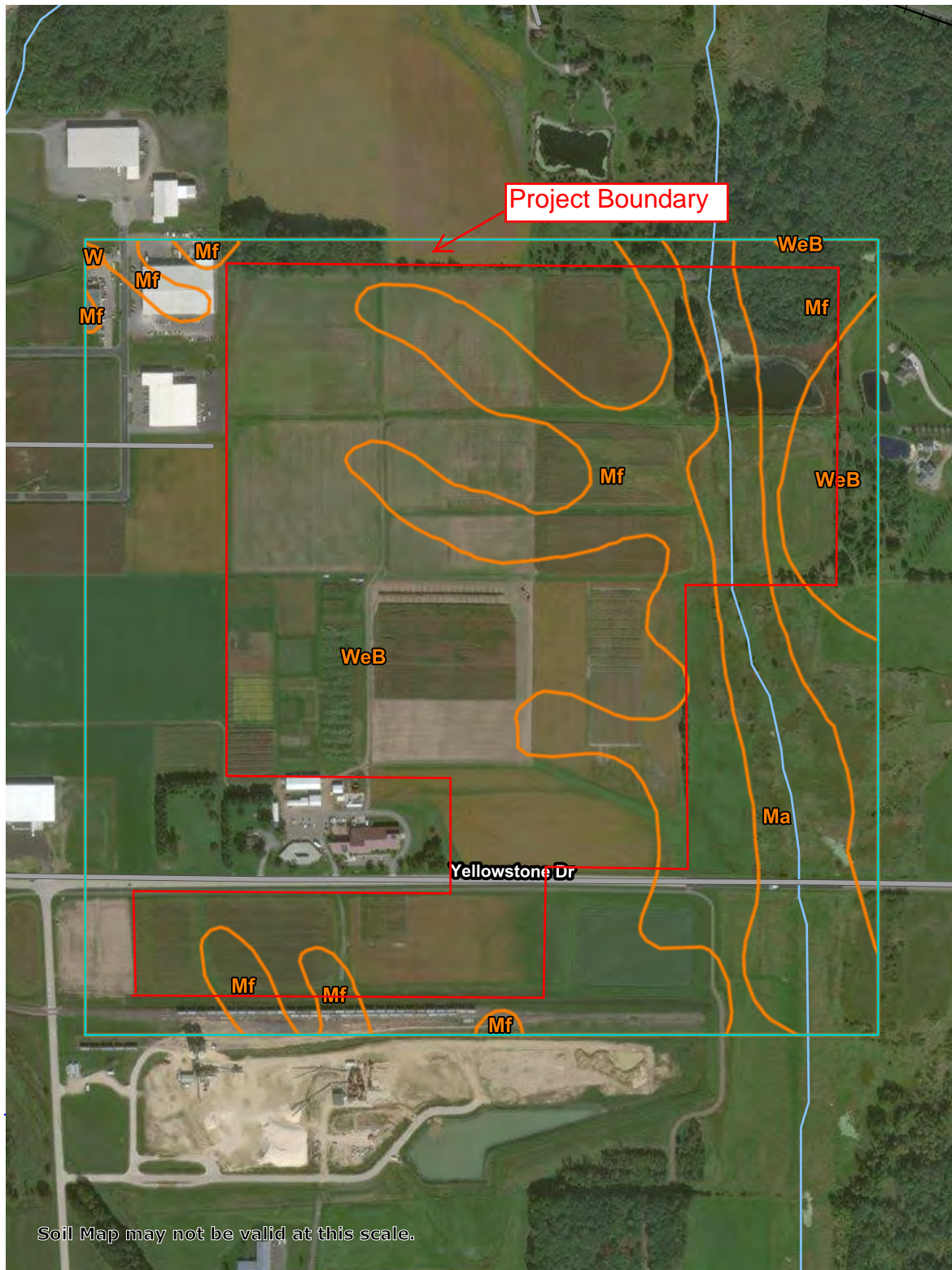
Soil Map—Wood County, Wisconsin
(U.W. Board of Regents & City of Marshfield Property)

90° 8' 18" W

90° 7' 22" W

44° 39' 3" N

44° 39' 3" N

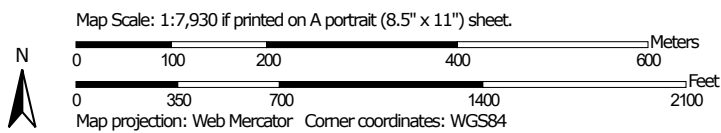


44° 38' 10" N

44° 38' 10" N

90° 8' 18" W

90° 7' 22" W



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

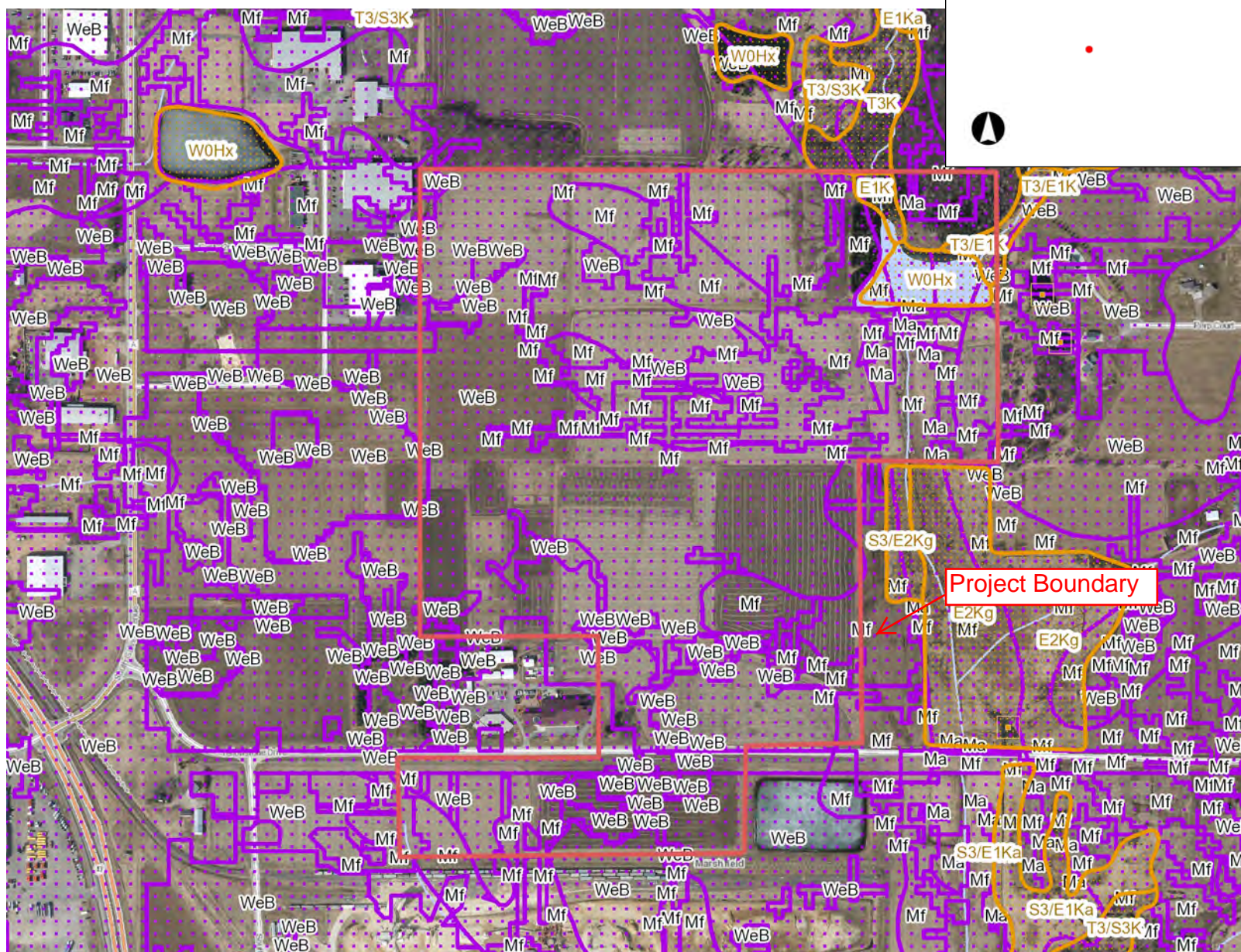
12/22/2020 Figure 2
Page 1 of 3

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|---|--------------|----------------|
| Ma | Mann silt loam | 25.8 | 9.9% |
| Mf | Marshfield silt loam, 0 to 2 percent slopes | 59.8 | 23.0% |
| W | Water | 0.1 | 0.1% |
| WeB | Withee silt loam, 0 to 3 percent slopes | 173.7 | 67.0% |
| Totals for Area of Interest | | 259.5 | 100.0% |



Surface Water Data Viewer Map



Legend

- Wetland Identifications and Confirmations
- Wetland Class Points
 - Dammed pond
 - Excavated pond
 - Filled excavated pond
 - Filled/draind wetland
 - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
 - Wetland
 - Upland
- Filled Areas
- Wetland Class Points
 - Dammed pond
 - Excavated pond
 - Filled excavated pond
 - Filled/draind wetland
 - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
 - Wetland
 - Upland
- Filled Areas
- NRCS Wetspots
- Maximum Extent Wetland Indicators
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
 - Interstate Highway
 - State Highway
 - US Highway
- County and Local Roads

Notes

0.3 0 0.13 0.3 Miles

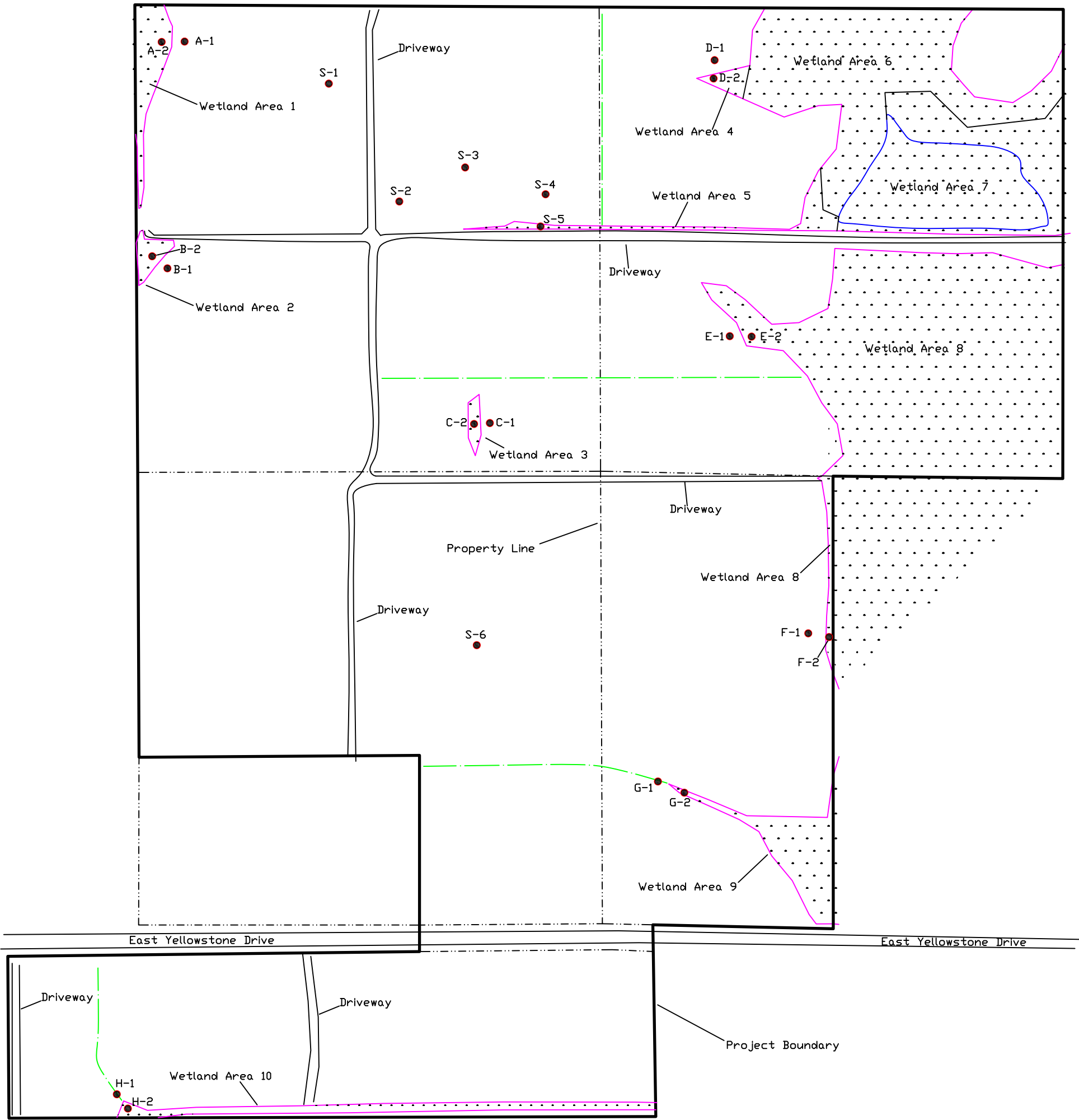
NAD_1983_HARN_Wisconsin_TM

1: 7,920

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>

Wetland Delineation Map

U.W. Board of Regents Property located in the SW1/2 and the SE1/2, Section 15, T.25N. - R.3E. and
the City of Marshfield Property located in the NW1/4, Section 22, T.25N.-R.3E.
City of Marshfield, Marathon County, Wisconsin



Wetland Area 1
Deg. Sedge Meadow
0.66 Acres

Wetland Area 2
Deg. Sedge Meadow
8,041 Sq. Ft.

Wetland Area 3
Deg. Sedge Meadow
4,515 Sq. Ft.

Wetland Area 4
Deg. Sedge Meadow
6,542 Sq. Ft.

Wetland Area 5
Deg. Sedge Meadow
0.39 Acres

Wetland Area 6
Hardwood Swamp
4.79 Acres

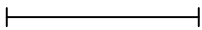
Wetland Area 7
Deg. Sedge Meadow
3.84 Acres
with a 2.56 Acre Pond

Wetland Area 8
Deg. Sedge Meadow
10.31 Acres

Wetland Area 9
Deg. Sedge Meadow
1.07 Acres

Wetland Area 10
Deg. Sedge Meadow
0.79 Acres

Scale: 1" = 300' Unless Noted



This is not a certified survey map

Legend:

Project Boundary

Wetland Boundary

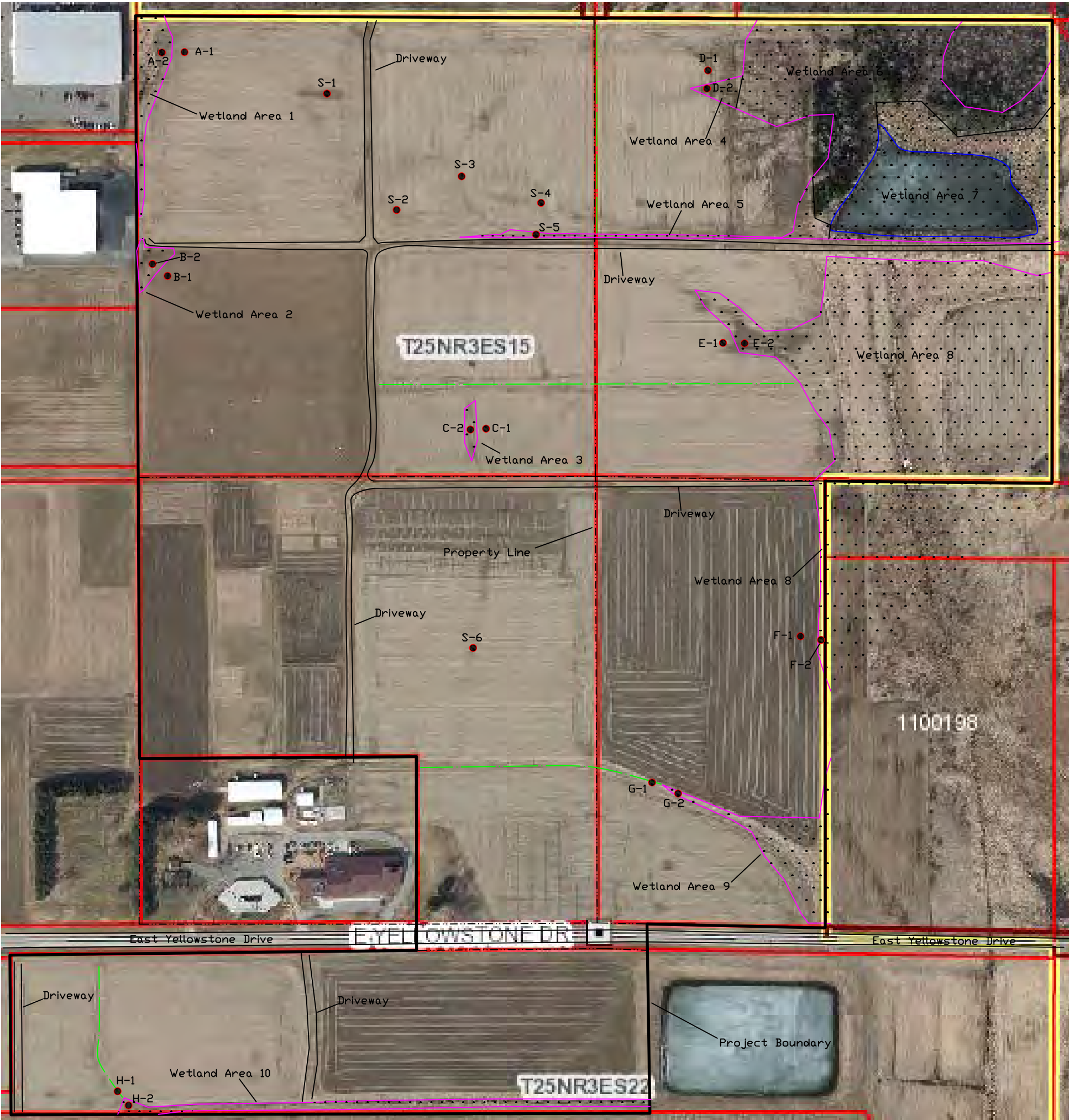
Upland Grass Swale

Sample Point

Created By:
Star Environmental, Inc.
PO Box 434 Marathon, WI 54448
Phone: (715) 443-6115
Fax: (715) 443-6108
Email: Starensvironmental@hotmail.com

Wetland Delineation Map

U.W. Board of Regents Property located in the SW1/2 and the SE1/2, Section 15, T.25N. - R.3E. and
the City of Marshfield Property located in the NW1/4, Section 22, T.25N.-R.3E.
City of Marshfield, Marathon County, Wisconsin



Wetland Area 1
Deg. Sedge Meadow
0.66 Acres

Wetland Area 2
Deg. Sedge Meadow
8,041 Sq. Ft.

Wetland Area 3
Deg. Sedge Meadow
4,515 Sq. Ft.

Wetland Area 4
Deg. Sedge Meadow
6,542 Sq. Ft.

Wetland Area 5
Deg. Sedge Meadow
0.39 Acres

Wetland Area 6
Hardwood Swamp
4.79 Acres

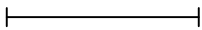
Wetland Area 7
Deg. Sedge Meadow
3.84 Acres
with a 2.56 Acre Pond

Wetland Area 8
Deg. Sedge Meadow
10.31 Acres

Wetland Area 9
Deg. Sedge Meadow
1.07 Acres

Wetland Area 10
Deg. Sedge Meadow
0.79 Acres

Scale: 1" = 300' Unless Noted



This is not a certified survey map

Legend:

Project Boundary

Wetland Boundary

Upland Grass Swale

Sample Point

Created By:
Star Environmental, Inc.
PO Box 434 Marathon, WI 54448
Phone: (715) 443-6115
Fax: (715) 443-6108
Email: Starensvironmental@hotmail.com

Figure 7

ATTACHMENT 2

PLANT LIST

**PLANT SPECIES RECORDED AT SAMPLE PLOTS
ON THE
U.W. BOARD OF REGENTS & CITY OF MARSHFIELD PROPERTY**

| Species | NCNE | Common Name |
|-----------------------------|------|---------------------|
| <i>Elymus repens</i> | FACU | Creeping Wild Rye |
| <i>Phalaris arundinacea</i> | FACW | Reed Canary Grass |
| <i>Fagopyrum esculentum</i> | UPL | Common Buckwheat |
| <i>Phleum pratense</i> | FACU | Common Timothy |
| <i>Taraxacum officinale</i> | FACU | Common Dandelion |
| <i>Trifolium hybridum</i> | FACU | Alsike Clover |
| <i>Typha angustifolia</i> | OBL | Narrow Leaf Cattail |
| <i>Scirpus cyperinus</i> | OBL | Cottongrass Bulrush |

ATTACHMENT 3

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: A-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 2 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) A previously planted corn crop was present prior to the field being tilled. No vegetation is currently present as a result. | |

HYDROLOGY

| | |
|--|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: A-1

| Tree Stratum | | | | | 50/20 Thresholds | | |
|--|---------------------------|------------------|------------------|------------------|---|-----|-----|
| | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 0 | 0 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum | | | | | Dominance Test Worksheet | | |
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) | | |
| 2 | | | | | Total Number of Dominant Species Across all Strata: <u>0</u> (B) | | |
| 3 | | | | | Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B) | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Herb Stratum | | | | | Prevalence Index Worksheet | | |
| | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Total % Cover of: | | |
| 2 | | | | | OBL species <u>0</u> x 1 = <u>0</u> | | |
| 3 | | | | | FACW species <u>0</u> x 2 = <u>0</u> | | |
| 4 | | | | | FAC species <u>0</u> x 3 = <u>0</u> | | |
| 5 | | | | | FACU species <u>0</u> x 4 = <u>0</u> | | |
| 6 | | | | | UPL species <u>0</u> x 5 = <u>0</u> | | |
| 7 | | | | | Column totals <u>0</u> (A) <u>0</u> (B) | | |
| 8 | | | | | Prevalence Index = B/A = <u> </u> | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Woody Vine Stratum | | | | | Hydrophytic Vegetation Indicators: | | |
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | <input type="checkbox"/> Rapid test for hydrophytic vegetation | | |
| 2 | | | | | <input type="checkbox"/> Dominance test is >50% | | |
| 3 | | | | | <input type="checkbox"/> Prevalence index is ≤3.0* | | |
| 4 | | | | | <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| 5 | | | | | <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) | | |
| | | | | | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |
| | | 0 | = Total Cover | | | | |
| Woody Vine Stratum | | | | | Definitions of Vegetation Strata: | | |
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 2 | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 3 | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| 4 | | | | | Woody vines - All woody vines greater than 3.28 ft in height. | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Remarks: (Include photo numbers here or on a separate sheet) The corn crop that was planted has been tilled with no vegetation present. | | | | | Hydrophytic vegetation present? <u> N </u> | | |

SOIL

Sampling Point: A-1

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

Soils have been recently tilled.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: A-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin: 0;">This area is a corner of the field that is too wet too crop. Additionally, commercial developments to the west have impermeable surfaces that shed water towards the depressional area.</p> | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: A-2

| Tree Stratum | | | | | Plot Size (30ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|-----------------------------|--|--|--|---------------------------|--|-----|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Sapling/Shrub Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Herb Stratum | | | | | Plot Size (5ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | <i>Phalaris arundinacea</i> | | | | | | 50 | Y | FACW | |
| 2 | <i>Typha angustifolia</i> | | | | | | 40 | Y | OBL | |
| 3 | <i>Scirpus cyperinus</i> | | | | | | 15 | N | OBL | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| | | | | | | | 105 | = Total Cover | | |
| Woody Vine Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 21 | 53 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|-----|-------|---------|
| OBL species | 55 | x 1 = | 55 |
| FACW species | 50 | x 2 = | 100 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 105 | (A) | 155 (B) |
| Prevalence Index = B/A = | | | 1.48 |

Hydrophytic Vegetation Indicators:

X Rapid test for hydrophytic vegetation

X Dominance test is >50%

X Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*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 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? Y

Remarks: (Include photo numbers here or on a separate sheet)
 Low grade wetland vegetation is present.

SOIL

Sampling Point: A-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | | |
|-------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> | Histisol (A1) | <input type="checkbox"/> | Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) | <input checked="" type="checkbox"/> | Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> | Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |
| <input type="checkbox"/> | Sandy Redox (S5) | | |
| <input type="checkbox"/> | Stripped Matrix (S6) | | |
| <input type="checkbox"/> | Dark Surface (S7) (LRR R, MLRA 149B) | | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: B-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 2 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">A previously planted winter wheat crop is present. Stubble is still present after harvest.</p> | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <p style="text-align: center;">GIS and Onsite Photos</p> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: B-1

| Tree Stratum Plot Size (30ft radius) | | | | | 50/20 Thresholds | | |
|---|--|---------------------|---------------------|---------------------|-----------------------|-----|-----|
| | | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 0 | 0 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum Plot Size (15ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Herb Stratum Plot Size (5ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Woody Vine Stratum Plot Size (15ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across all Strata: 0 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B) | | | | | | | |
| Prevalence Index Worksheet Total % Cover of: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column totals 0 (A) 0 (B) Prevalence Index = B/A = | | | | | | | |
| Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) <small>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</small> | | | | | | | |
| 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 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? N | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet) The winter wheat crop that was planted has been harvested or cut/mowed. | | | | | | | |

SOIL

Sampling Point: B-1

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

- ____ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ____ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ____ 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: B-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin: 0;">This area is a corner of the field that is too wet too crop. Additionally, commercial developments to the west have impermeable surfaces that shed water towards the depressional area.</p> | |

HYDROLOGY

| | |
|--|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: B-2

| Tree Stratum | | | | | Plot Size (30ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|--|--|--|--|---------------------------|--|---|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

| Sapling/Shrub Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|--|--|--|--|---------------------------|--|---|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

| Herb Stratum | | | | | Plot Size (5ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|-----------------------------|--|--|--|--------------------------|--|-----|---------------------|---------------------|---------------------|
| 1 | <i>Typha angustifolia</i> | | | | | | 60 | Y | OBL | |
| 2 | <i>Phalaris arundinacea</i> | | | | | | 35 | Y | FACW | |
| 3 | <i>Scirpus cyperinus</i> | | | | | | 10 | N | OBL | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| | | | | | | | 105 | = Total Cover | | |

| Woody Vine Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|--------------------|--|--|--|--|---------------------------|--|---|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 21 | 53 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|-----|-------|---------|
| OBL species | 70 | x 1 = | 70 |
| FACW species | 35 | x 2 = | 70 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 105 | (A) | 140 (B) |
| Prevalence Index = B/A = | | | 1.33 |

Hydrophytic Vegetation Indicators:

X Rapid test for hydrophytic vegetation

X Dominance test is >50%

X Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*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 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? Y

Remarks: (Include photo numbers here or on a separate sheet)
 Low grade wetland vegetation is present.

SOIL

Sampling Point: B-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> (LRR R, MLRA 149B) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

_____ 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**)
 _____ Dark Surface (S7) (**LRR K, L**)
 _____ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: C-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p>A previously planted corn crop was present prior to the field being tilled. No vegetation is currently present as a result.</p> | |

HYDROLOGY

| | |
|---|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 50%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

Sampling Point: C-1

| 50/20 Thresholds | | | | |
|------------------|---------------------------|------------------|------------------|------------------|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 = Total Cover | | |

| Sapling/Shrub Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|---------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 = Total Cover | | |

| Herb Stratum | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|--------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 0 = Total Cover | | |

| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|--------------------|---------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 = Total Cover | | |

| 50/20 Thresholds | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 0 | 0 |
| Woody Vine Stratum | 0 | 0 |

| Dominance Test Worksheet | | |
|--|--|--|
| Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) | | |
| Total Number of Dominant Species Across all Strata: <u>0</u> (B) | | |
| Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B) | | |

| Prevalence Index Worksheet | | |
|--|----------------|--------------|
| Total % Cover of: | | |
| OBL species | <u>0</u> x 1 = | <u>0</u> |
| FACW species | <u>0</u> x 2 = | <u>0</u> |
| FAC species | <u>0</u> x 3 = | <u>0</u> |
| FACU species | <u>0</u> x 4 = | <u>0</u> |
| UPL species | <u>0</u> x 5 = | <u>0</u> |
| Column totals | <u>0</u> (A) | <u>0</u> (B) |
| Prevalence Index = B/A = <u> </u> | | |

| Hydrophytic Vegetation Indicators: | |
|--|--|
| <u> </u> Rapid test for hydrophytic vegetation | |
| <u> </u> Dominance test is >50% | |
| <u> </u> Prevalence index is ≤3.0* | |
| <u> </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | |
| <u> </u> Problematic hydrophytic vegetation* (explain) | |
| *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 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? | |
|---------------------------------|--|
| <u> N </u> | |

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

The corn crop that was planted has been tilled with no vegetation present.

SOIL

Sampling Point: C-1

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

Soils have been recently tilled.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: C-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 10px; min-height: 50px;"> This sample point was planted to a corn crop. Currently corn stubble is present. </div> | |

HYDROLOGY

| | |
|--|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; min-height: 30px;"> GIS and Onsite Photos </div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: C-2

| Tree Stratum | | | | | 50/20 Thresholds | | |
|---------------------------|------------------|------------------|------------------|------------------|--|-----|--|
| Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% | |
| 1 | | | | | Tree Stratum | 0 | |
| 2 | | | | | Sapling/Shrub Stratum | 0 | |
| 3 | | | | | Herb Stratum | 6 | |
| 4 | | | | | Woody Vine Stratum | 0 | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | | | 0 = Total Cover | | | |
| Sapling/Shrub Stratum | | | | | Dominance Test Worksheet | | |
| Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | | |
| 1 | | | | | Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) | | |
| 2 | | | | | Total Number of Dominant Species Across all Strata: <u>1</u> (B) | | |
| 3 | | | | | Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B) | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | | | 0 = Total Cover | | | |
| Herb Stratum | | | | | Prevalence Index Worksheet | | |
| Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | | |
| 1 | | | | | Total % Cover of: | | |
| 2 | | | | | OBL species <u>0</u> x 1 = <u>0</u> | | |
| 3 | | | | | FACW species <u>0</u> x 2 = <u>0</u> | | |
| 4 | | | | | FAC species <u>30</u> x 3 = <u>90</u> | | |
| 5 | | | | | FACU species <u>0</u> x 4 = <u>0</u> | | |
| 6 | | | | | UPL species <u>0</u> x 5 = <u>0</u> | | |
| 7 | | | | | Column totals <u>30</u> (A) <u>90</u> (B) | | |
| 8 | | | | | Prevalence Index = B/A = <u>3.00</u> | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | | | 30 = Total Cover | | | |
| Woody Vine Stratum | | | | | Hydrophytic Vegetation Indicators: | | |
| Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | | |
| 1 | | | | | Rapid test for hydrophytic vegetation | | |
| 2 | | | | | <input checked="" type="checkbox"/> Dominance test is >50% | | |
| 3 | | | | | <input checked="" type="checkbox"/> Prevalence index is ≤3.0* | | |
| 4 | | | | | Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| 5 | | | | | Problematic hydrophytic vegetation* (explain) | | |
| 6 | | | | | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | | | 0 = Total Cover | | | |
| | | | | | 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 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? <u>Y</u> | | |

Remarks: (Include photo numbers here or on a separate sheet)
 A corn crop was present at this site. Stubble is present.

SOIL

Sampling Point: C-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> (LRR R, MLRA 149B) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

Soils have been tilled in the past.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: D-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) A previously planted corn crop was present prior to the field being harvested. No vegetation is currently present as a result. | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: D-1

| Tree Stratum | | | | | 50/20 Thresholds | | |
|--------------|---------------------------|------------------|------------------|------------------|-----------------------|-----|-----|
| | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 0 | 0 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Sapling/Shrub Stratum | | | | | Dominance Test Worksheet | | |
|-----------------------|---------------------------|------------------|------------------|------------------|---|-------|-------|
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Number of Dominant Species that are OBL, FACW, or FAC: | 0 | (A) |
| 2 | | | | | Total Number of Dominant Species Across all Strata: | 0 | (B) |
| 3 | | | | | Percent of Dominant Species that are OBL, FACW, or FAC: | 0.00% | (A/B) |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Herb Stratum | | | | | Prevalence Index Worksheet | | |
|--------------|--------------------------|------------------|------------------|------------------|----------------------------|---|-----------|
| | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Total % Cover of: | | |
| 2 | | | | | OBL species | 0 | x 1 = 0 |
| 3 | | | | | FACW species | 0 | x 2 = 0 |
| 4 | | | | | FAC species | 0 | x 3 = 0 |
| 5 | | | | | FACU species | 0 | x 4 = 0 |
| 6 | | | | | UPL species | 0 | x 5 = 0 |
| 7 | | | | | Column totals | 0 | (A) 0 (B) |
| 8 | | | | | Prevalence Index = B/A = | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Woody Vine Stratum | | | | | Hydrophytic Vegetation Indicators: | | |
|--------------------|---------------------------|------------------|------------------|------------------|---|--|--|
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | <input type="checkbox"/> Rapid test for hydrophytic vegetation | | |
| 2 | | | | | <input type="checkbox"/> Dominance test is >50% | | |
| 3 | | | | | <input type="checkbox"/> Prevalence index is ≤3.0* | | |
| 4 | | | | | <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| 5 | | | | | <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) | | |
| | | | | | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |

| Woody Vine Stratum | | | | | Definitions of Vegetation Strata: | | |
|--------------------|---------------------------|------------------|------------------|------------------|---|--|--|
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 2 | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 3 | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| 4 | | | | | Woody vines - All woody vines greater than 3.28 ft in height. | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Woody Vine Stratum | | | | | Hydrophytic vegetation present? | | |
|--------------------|---------------------------|------------------|------------------|------------------|---------------------------------|--|--|
| | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |

Remarks: (Include photo numbers here or on a separate sheet)
 The corn crop that was planted has been harvested with no vegetation present.

SOIL
Sampling Point: D-1

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------|-------|-----------|---------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-7 | 10YR 3/2 | 100 | - | 0 | | | silt loam | |
| -10 | 10YR 3/2 | 90 | 10YR 5/6 | 10 | C | M | silt loam | |
| -24 | 10YR 5/3 | 75 | 7.5YR 5/8 | 25 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) (LRR K, L) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: D-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 10px; min-height: 40px;"> This sample point was planted to a corn crop. Currently corn stubble is present. </div> | |

HYDROLOGY

| | |
|--|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; min-height: 20px;"> GIS and Onsite Photos </div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: D-2

| Tree Stratum Plot Size (30ft radius) Absolute % Cover Dominant Species Indicator Status | | | | | 50/20 Thresholds | | |
|--|--|--|--|--|--|-----|-----|
| 1 | | | | | | 20% | 50% |
| 2 | | | | | Tree Stratum | 0 | 0 |
| 3 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 4 | | | | | Herb Stratum | 0 | 0 |
| 5 | | | | | Woody Vine Stratum | 0 | 0 |
| 6 | | | | | Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B) | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| <u>0</u> = Total Cover | | | | | | | |
| Sapling/Shrub Stratum Plot Size (15ft radius) Absolute % Cover Dominant Species Indicator Status | | | | | Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____ | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| <u>0</u> = Total Cover | | | | | | | |
| Herb Stratum Plot Size (5ft radius) Absolute % Cover Dominant Species Indicator Status | | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| <u>0</u> = Total Cover | | | | | | | |
| Woody Vine Stratum Plot Size (15ft radius) Absolute % Cover Dominant Species Indicator Status | | | | | 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 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. | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| <u>0</u> = Total Cover | | | | | | | |
| Hydrophytic vegetation present? <u>N</u> | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet) A corn crop was present at this site. Stubble is present but no other vegetation is present. | | | | | | | |

SOIL

Sampling Point: D-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | | |
|-------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> | Histisol (A1) | <input type="checkbox"/> | Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) | <input checked="" type="checkbox"/> | Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> | Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |
| <input type="checkbox"/> | Sandy Redox (S5) | | |
| <input type="checkbox"/> | Stripped Matrix (S6) | | |
| <input type="checkbox"/> | Dark Surface (S7) (LRR R, MLRA 149B) | | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalve 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

Soils have been tilled in the past.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: E-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">A previously planted corn crop was present prior to the field being harvested. No vegetation is currently present as a result.</p> | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: E-1

| Tree Stratum Plot Size (30ft radius) | | | | | 50/20 Thresholds | | |
|--|-----------------------|---------------------|---------------------|---------------------|-----------------------|-----|-----|
| | | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 2 | 5 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum Plot Size (15ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Herb Stratum Plot Size (5ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | <i>Setaria pumila</i> | 10 | Y | FAC | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 10 | = Total Cover | | | | |
| Woody Vine Stratum Plot Size (15ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 | = 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: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|-------------|-------|--------|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 10 | x 3 = | 30 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 10 | (A) | 30 (B) |
| Prevalence Index = B/A = | <u>3.00</u> | | |

Hydrophytic Vegetation Indicators:

☒ Rapid test for hydrophytic vegetation

☒ Dominance test is >50%

☒ Prevalence index is ≤3.0*

☐ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

☐ Problematic hydrophytic vegetation* (explain)

*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 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? Y

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

The corn crop that was planted has been harvested with minimal vegetation present.

SOIL
Sampling Point: E-1

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------|-------|-----------|---------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-7 | 10YR 3/2 | 100 | - | 0 | | | silt loam | |
| -10 | 10YR 3/2 | 90 | 10YR 5/6 | 10 | C | M | silt loam | |
| -24 | 10YR 5/3 | 75 | 7.5YR 5/8 | 25 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: E-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 10px; min-height: 50px;"> This sample point was planted to a corn crop. Currently corn stubble is present. </div> | |

HYDROLOGY

| | |
|---|--|
| Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8) | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> Water table present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 0 </u> Saturation present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 0 </u> (includes capillary fringe) | Indicators of wetland hydrology present? <u> Y </u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; min-height: 30px;"> GIS and Onsite Photos </div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: E-2

| Tree Stratum | | | | | Plot Size (30ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|-----------------------|--|--|--|---------------------------|--|----|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Sapling/Shrub Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Herb Stratum | | | | | Plot Size (5ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | <i>Setaria pumila</i> | | | | | | 50 | Y | FAC | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| | | | | | | | 50 | = Total Cover | | |
| Woody Vine Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 10 | 25 |
| Woody Vine Stratum | 0 | 0 |

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: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|--------|-------|---------|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 50 | x 3 = | 150 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 50 (A) | | 150 (B) |
| Prevalence Index = B/A = | | | 3.00 |

Hydrophytic Vegetation Indicators:

☒ Rapid test for hydrophytic vegetation

☒ Dominance test is >50%

☒ Prevalence index is ≤3.0*

☐ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

☐ Problematic hydrophytic vegetation* (explain)

*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 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? Y

Remarks: (Include photo numbers here or on a separate sheet)
 A corn crop was present at this site. Stubble is present.

SOIL

Sampling Point: E-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> (LRR R, MLRA 149B) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalve 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

Depth was limited due to wetness.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: F-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 2 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">A previously planted winter wheat crop is present. Stubble is still present after harvest.</p> | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <p style="text-align: center;">GIS and Onsite Photos</p> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: F-1

| Tree Stratum | | | | | 50/20 Thresholds | | |
|--------------|---------------------------|------------------|------------------|------------------|-----------------------|-----|-----|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 0 | 0 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Sapling/Shrub Stratum | | | | | Dominance Test Worksheet | | |
|-----------------------|---------------------------|------------------|------------------|------------------|---|-------|-------|
| Sapling/Shrub Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Number of Dominant Species that are OBL, FACW, or FAC: | 0 | (A) |
| 2 | | | | | Total Number of Dominant Species Across all Strata: | 0 | (B) |
| 3 | | | | | Percent of Dominant Species that are OBL, FACW, or FAC: | 0.00% | (A/B) |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Herb Stratum | | | | | Prevalence Index Worksheet | | |
|--------------|--------------------------|------------------|------------------|------------------|----------------------------|---------|-------|
| Herb Stratum | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Total % Cover of: | | |
| 2 | | | | | OBL species | 0 x 1 = | 0 |
| 3 | | | | | FACW species | 0 x 2 = | 0 |
| 4 | | | | | FAC species | 0 x 3 = | 0 |
| 5 | | | | | FACU species | 0 x 4 = | 0 |
| 6 | | | | | UPL species | 0 x 5 = | 0 |
| 7 | | | | | Column totals | 0 (A) | 0 (B) |
| 8 | | | | | Prevalence Index = B/A = | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Woody Vine Stratum | | | | | Hydrophytic Vegetation Indicators: | | |
|--------------------|---------------------------|------------------|------------------|------------------|---|-----|-----|
| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | <input type="checkbox"/> Rapid test for hydrophytic vegetation | | |
| 2 | | | | | <input type="checkbox"/> Dominance test is >50% | | |
| 3 | | | | | <input type="checkbox"/> Prevalence index is ≤3.0* | | |
| 4 | | | | | <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| 5 | | | | | <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) | | |
| | | | | | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |

| Woody Vine Stratum | | | | | Definitions of Vegetation Strata: | | |
|--------------------|---------------------------|------------------|------------------|------------------|---|-----|-----|
| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 2 | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 3 | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| 4 | | | | | Woody vines - All woody vines greater than 3.28 ft in height. | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Woody Vine Stratum | | | | | Hydrophytic vegetation present? | | |
|--------------------|---------------------------|------------------|------------------|------------------|---------------------------------|-----|-----|
| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |

Remarks: (Include photo numbers here or on a separate sheet)
 The winter wheat crop that was planted has been harvested or cut/mowed.

SOIL

Sampling Point: F-1

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: F-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> Sample point is loacted along the east fence line. </div> | |

HYDROLOGY

| | |
|--|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u> X </u> No <u> X </u> Depth (inches): _____ Water table present? Yes <u> X </u> No <u> X </u> Depth (inches): <u> 8 </u> Saturation present? Yes <u> X </u> No <u> X </u> Depth (inches): <u> 2 </u> (includes capillary fringe) | Indicators of wetland hydrology present? <u> Y </u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> GIS and Onsite Photos </div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: F-2

| Tree Stratum Plot Size (30ft radius) | | | | | 50/20 Thresholds | | |
|--|-----------------------------|---------------------|---------------------|---------------------|-----------------------|-----|-----|
| | | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 20 | 50 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum Plot Size (15ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Herb Stratum Plot Size (5ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | <i>Phalaris arundinacea</i> | 100 | Y | FACW | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 100 | = Total Cover | | | | |
| Woody Vine Stratum Plot Size (15ft radius) | | | | | | | |
| | | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 | = 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: 100.00% (A/B)

Prevalence Index Worksheet
 Total % Cover of:
 OBL species 0 x 1 = 0
 FACW species 100 x 2 = 200
 FAC species 0 x 3 = 0
 FACU species 0 x 4 = 0
 UPL species 0 x 5 = 0
 Column totals 100 (A) 200 (B)
 Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
☒ Rapid test for hydrophytic vegetation
☒ Dominance test is >50%
☒ Prevalence index is ≤3.0*
 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
 Problematic hydrophytic vegetation* (explain)
*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 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? Y

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

SOIL

Sampling Point: F-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | | |
|-------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> | Histisol (A1) | <input type="checkbox"/> | Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) | <input checked="" type="checkbox"/> | Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> | Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |
| <input type="checkbox"/> | Sandy Redox (S5) | | |
| <input type="checkbox"/> | Stripped Matrix (S6) | | |
| <input type="checkbox"/> | Dark Surface (S7) (LRR R, MLRA 149B) | | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: G-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 2 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) The crop appears to be planted to a cover crop of winter wheat, common buckwheat and a tuber (radish). An upland grassy swale is present in the plot as well. | |

HYDROLOGY

| | |
|--|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

Sampling Point: G-1

| Tree Stratum | | | | | Sampling Form | | |
|--|---------------------------|------------------|------------------|------------------|---|-----|-----|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | 50/20 Thresholds | | |
| 1 | | | | | Tree Stratum | 20% | 50% |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 14 | 35 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | Dominance Test Worksheet | | |
| 6 | | | | | Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) | | |
| 7 | | | | | Total Number of Dominant Species Across all Strata: <u>2</u> (B) | | |
| 8 | | | | | Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B) | | |
| 9 | | | | | Prevalence Index Worksheet | | |
| 10 | | | | | Total % Cover of: | | |
| | | | | | OBL species <u>0</u> x 1 = <u>0</u> | | |
| | | | | | FACW species <u>0</u> x 2 = <u>0</u> | | |
| | | | | | FAC species <u>0</u> x 3 = <u>0</u> | | |
| | | | | | FACU species <u>70</u> x 4 = <u>280</u> | | |
| | | | | | UPL species <u>0</u> x 5 = <u>0</u> | | |
| | | | | | Column totals <u>70</u> (A) <u>280</u> (B) | | |
| | | | | | Prevalence Index = B/A = <u>4.00</u> | | |
| Sapling/Shrub Stratum | | | | | Hydrophytic Vegetation Indicators: | | |
| 1 | | | | | <input type="checkbox"/> Rapid test for hydrophytic vegetation | | |
| 2 | | | | | <input type="checkbox"/> Dominance test is >50% | | |
| 3 | | | | | <input type="checkbox"/> Prevalence index is ≤3.0* | | |
| 4 | | | | | <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| 5 | | | | | <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) | | |
| 6 | | | | | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |
| 7 | | | | | Definitions of Vegetation Strata: | | |
| 8 | | | | | Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. | | |
| 9 | | | | | Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. | | |
| 10 | | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| 11 | | | | | Woody vines - All woody vines greater than 3.28 ft in height. | | |
| 12 | | | | | Hydrophytic vegetation present? <u>N</u> | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| Herb Stratum | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| Woody Vine Stratum | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet) | | | | | | | |
| The crop appears to be planted to a cover crop of winter wheat, common buckwheat and a tuber (radish). An upland grassy swale is present with no hydrophytic vegetation present. | | | | | | | |

SOIL

Sampling Point: G-1

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------|-------|-----------|-----------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-8 | 10YR 3/2 | 100 | - | 0 | | | silt loam | compacted |
| -17 | 10YR 5/3 | 80 | 7.5YR 5/8 | 20 | C | M | silt loam | |
| -24 | 10YR 6/3 | 85 | 7.5YR 5/8 | 15 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

Past grading occurred where the grassy swale was created. Compacted edges of the cropland are present.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: G-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">Sample point is located in a drainage swale with mixed upland and wetland vegetation at the sample point. Past grading has occurred.</p> | |

HYDROLOGY

| | |
|--|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: G-2

| Tree Stratum | | | | | Plot Size (30ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|-----------------------------|--|--|--|---------------------------|--|-----|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Sapling/Shrub Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Herb Stratum | | | | | Plot Size (5ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | <i>Phalaris arundinacea</i> | | | | | | 70 | Y | FACW | |
| 2 | <i>Elymus repens</i> | | | | | | 30 | Y | FACU | |
| 3 | <i>Phleum pratense</i> | | | | | | 10 | N | FACU | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| | | | | | | | 110 | = Total Cover | | |
| Woody Vine Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 22 | 55 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|---------|-------|---------|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 70 | x 2 = | 140 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 40 | x 4 = | 160 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 110 (A) | | 300 (B) |
| Prevalence Index = B/A = | | | 2.73 |

Hydrophytic Vegetation Indicators:

☐ Rapid test for hydrophytic vegetation

☐ Dominance test is >50%

☒ Prevalence index is ≤3.0*

☐ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

☐ Problematic hydrophytic vegetation* (explain)

*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 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? Y

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

SOIL

Sampling Point: G-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | | |
|-------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> | Histisol (A1) | <input type="checkbox"/> | Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> | Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> | Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> | Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> | Stratified Layers (A5) | <input checked="" type="checkbox"/> | Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> | Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> | Redox Dark Surface (F6) |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> | Redox Depressions (F8) |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | | |
| <input type="checkbox"/> | Sandy Redox (S5) | | |
| <input type="checkbox"/> | Stripped Matrix (S6) | | |
| <input type="checkbox"/> | Dark Surface (S7) (LRR R, MLRA 149B) | | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches): _____

Hydric soil present? Y

Remarks:

Past grading has occurred.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: H-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 2 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> Sample point is located in a planted hay crop and upland grassy swale. </div> | |

HYDROLOGY

| | |
|---|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 50%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> GIS and Onsite Photos </div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: H-1

| Tree Stratum Plot Size (30ft radius) | | | | | 50/20 Thresholds | | |
|--|---------------------------|------------------|------------------|------------------|-----------------------|-----|-----|
| | | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 22 | 55 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum Plot Size (15ft radius) | | | | | | | |
| | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |
| Herb Stratum Plot Size (5ft radius) | | | | | | | |
| | | | | | | | |
| 1 | <i>Elymus repens</i> | 80 | Y | FACU | | | |
| 2 | <i>Trifolium hybridum</i> | 30 | Y | FACU | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 110 | = Total Cover | | | | |
| Woody Vine Stratum Plot Size (15ft radius) | | | | | | | |
| | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 | = Total Cover | | | | |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|-------------|-------|---------|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 110 | x 4 = | 440 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 110 | (A) | 440 (B) |
| Prevalence Index = B/A = | <u>4.00</u> | | |

Hydrophytic Vegetation Indicators:

☐ Rapid test for hydrophytic vegetation

☐ Dominance test is >50%

☐ Prevalence index is ≤3.0*

☐ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

☐ Problematic hydrophytic vegetation* (explain)

*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 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? N

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

An upland grassy swale is present with no hydrophytic vegetation present.

SOIL

Sampling Point: H-1

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

Past grading occurred where the grassy swale was created. Compacted edges of the cropland are present.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: H-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">Sample point is located in a drainage swale with mixed upland and wetland vegetation at the sample point. Past grading has occurred.</p> | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: H-2

| Tree Stratum Plot Size (30ft radius) | | | | | 50/20 Thresholds | | |
|---|--|---------------------|---------------------|---------------------|-----------------------|-----|-----|
| | | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 20 | 50 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 | = Total Cover | | | | |

| Sapling/Shrub Stratum Plot Size (15ft radius) | | | | |
|--|--|---------------------|---------------------|---------------------|
| | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Herb Stratum Plot Size (5ft radius) | | | | |
|--|-----------------------------|---------------------|---------------------|---------------------|
| | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | <i>Phalaris arundinacea</i> | 80 | Y | FACW |
| 2 | <i>Trifolium hybridum</i> | 10 | N | FACU |
| 3 | <i>Scirpus cyperinus</i> | 10 | N | OBL |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 100 | = Total Cover | |

| Woody Vine Stratum Plot Size (15ft radius) | | | | |
|---|--|---------------------|---------------------|---------------------|
| | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 | = 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: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|-------------|-------|---------|
| OBL species | 10 | x 1 = | 10 |
| FACW species | 80 | x 2 = | 160 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 10 | x 4 = | 40 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 100 | (A) | 210 (B) |
| Prevalence Index = B/A = | <u>2.10</u> | | |

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

X Dominance test is >50%

X Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*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 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? Y

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

SOIL

Sampling Point: H-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> (LRR R, MLRA 149B) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? Y

Remarks:

Past grading has occurred.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: S-1
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) This sample point was taken in an area identified on the offsite aerial photo review. Past grading for the adjacent access driveway upgrade has occurred in this area and is the cause for "wetness features" on aerial photographs. Uplands are present in these areas. A previously planted corn crop was present prior to the field being harvested. | |

HYDROLOGY

| | |
|--|--|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

Sampling Point: S-1

| 50/20 Thresholds | | | | |
|------------------|---------------------------|------------------|------------------|------------------|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 = Total Cover | | |

| Sapling/Shrub Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|---------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 = Total Cover | | |

| Herb Stratum | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|--------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 0 = Total Cover | | |

| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|--------------------|---------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 = Total Cover | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| Tree Stratum | 20% | 50% |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 0 | 0 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 0 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | |
|--|----------------|--------------|
| OBL species | <u>0</u> x 1 = | <u>0</u> |
| FACW species | <u>0</u> x 2 = | <u>0</u> |
| FAC species | <u>0</u> x 3 = | <u>0</u> |
| FACU species | <u>0</u> x 4 = | <u>0</u> |
| UPL species | <u>0</u> x 5 = | <u>0</u> |
| Column totals | <u>0</u> (A) | <u>0</u> (B) |
| Prevalence Index = B/A = <u> </u> | | |

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

 Dominance test is >50%

 Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*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 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? N

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

The corn crop that was planted has been harvested with no vegetation present due to recent tillage of the field.

SOIL

Sampling Point: S-1

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

Soils have been recently tilled. Additionally, past grading as occurred.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: S-2
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) This sample point was taken in an area identified on the offsite aerial photo review. Past experimental terrace grading has occurred in this area and is the cause for "wetness features" on aerial photographs. Uplands are present in these areas. A previously planted corn crop was present prior to the field being harvested. | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

Sampling Point: S-2

| 50/20 Thresholds | | | | |
|------------------|---------------------------|------------------|------------------|------------------|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 = Total Cover | | |

| Sapling/Shrub Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|---------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 = Total Cover | | |

| Herb Stratum | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|--------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 0 = Total Cover | | |

| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status |
|--------------------|---------------------------|------------------|------------------|------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 = Total Cover | | |

| 50/20 Thresholds | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 0 | 0 |
| Woody Vine Stratum | 0 | 0 |

| Dominance Test Worksheet | |
|--|--|
| Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) | |
| Total Number of Dominant Species Across all Strata: <u>0</u> (B) | |
| Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B) | |

| Prevalence Index Worksheet | |
|--|---------------------------|
| Total % Cover of: | |
| OBL species | <u>0</u> x 1 = <u>0</u> |
| FACW species | <u>0</u> x 2 = <u>0</u> |
| FAC species | <u>0</u> x 3 = <u>0</u> |
| FACU species | <u>0</u> x 4 = <u>0</u> |
| UPL species | <u>0</u> x 5 = <u>0</u> |
| Column totals | <u>0</u> (A) <u>0</u> (B) |
| Prevalence Index = B/A = <u> </u> | |

| Hydrophytic Vegetation Indicators: | |
|--|--|
| <u> </u> Rapid test for hydrophytic vegetation | |
| <u> </u> Dominance test is >50% | |
| <u> </u> Prevalence index is ≤3.0* | |
| <u> </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | |
| <u> </u> Problematic hydrophytic vegetation* (explain) | |
| *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 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? | |
|---------------------------------|--|
| <u> </u> N <u> </u> | |

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

The corn crop that was planted has been harvested with no vegetation present.

SOIL

Sampling Point: S-2

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

[illegible]

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- _____ Histisol (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) (**LRR R, MLRA 149B**)

Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
 Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
 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)

Indicators for Problematic Hydric Soils:

☐ 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**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric soil present? N

Remarks:

Soils have been recently tilled. Additionally, past grading as occurred with the experimental terrace drainage feature.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: S-3
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) This sample point was taken in an area identified on the offsite aerial photo review. Past experimental terrace grading has occurred in this area and is the cause for "wetness features" on aerial photographs. Uplands are present in these areas. A previously planted corn crop was present prior to the field being harvested. | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

Sampling Point: S-3

| Tree Stratum | | | | | 20% 50% | | |
|-----------------------|-----------------------------|------------------|------------------|------------------|-----------------------|------|--|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Tree Stratum | 0 0 | |
| 2 | | | | | Sapling/Shrub Stratum | 0 0 | |
| 3 | | | | | Herb Stratum | 5 13 | |
| 4 | | | | | Woody Vine Stratum | 0 0 | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 = Total Cover | | | | | |
| Sapling/Shrub Stratum | | | | | | | |
| Sapling/Shrub Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 = Total Cover | | | | | |
| Herb Stratum | | | | | | | |
| Herb Stratum | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | <i>Setaria pumila</i> | 20 | Y | FAC | | | |
| 2 | <i>Taraxacum officinale</i> | 5 | Y | FACU | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 25 = Total Cover | | | | | |
| Woody Vine Stratum | | | | | | | |
| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 = Total Cover | | | | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| Tree Stratum | 20% | 50% |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 5 | 13 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | |
|--------------------------|-----------------|---------------|
| OBL species | <u>0</u> x 1 = | <u>0</u> |
| FACW species | <u>0</u> x 2 = | <u>0</u> |
| FAC species | <u>20</u> x 3 = | <u>60</u> |
| FACU species | <u>5</u> x 4 = | <u>20</u> |
| UPL species | <u>0</u> x 5 = | <u>0</u> |
| Column totals | <u>25</u> (A) | <u>80</u> (B) |
| Prevalence Index = B/A = | | <u>3.20</u> |

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

 Dominance test is >50%

 Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*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 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? N

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

The corn crop that was planted has been harvested with minimal vegetation present.

SOIL**Sampling Point:** S-3

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------|-------|-----------|-----------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-6 | 10YR 3/3 | 100 | - | 0 | | | silt loam | Compacted |
| -9 | 10YR 3/2 | 95 | 10YR 5/6 | 5 | C | M | silt loam | Compacted |
| -24 | 10YR 5/3 | 80 | 7.5YR 5/8 | 20 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

Soils have been recently tilled. Additionally, past grading as occurred with the experimental terrace drainage feature.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: S-4
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) This sample point was taken in an area identified on the offsite aerial photo review. Past experimental terrace grading has occurred in this area and is the cause for "wetness features" on aerial photographs. Uplands are present in these areas. A previously planted corn crop was present prior to the field being harvested. | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

Sampling Point: S-4

| Tree Stratum | | | | | 20% 50% | | |
|-----------------------|---------------------------|------------------|------------------|------------------|-----------------------|------|--|
| Tree Stratum | Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | Tree Stratum | 0 0 | |
| 2 | | | | | Sapling/Shrub Stratum | 0 0 | |
| 3 | | | | | Herb Stratum | 4 10 | |
| 4 | | | | | Woody Vine Stratum | 0 0 | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 = Total Cover | | | | | |
| Sapling/Shrub Stratum | | | | | | | |
| Sapling/Shrub Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | 0 = Total Cover | | | | | |
| Herb Stratum | | | | | | | |
| Herb Stratum | Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | <i>Setaria pumila</i> | 10 | Y | FAC | | | |
| 2 | <i>Elymus repens</i> | 10 | Y | FACU | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | 20 = Total Cover | | | | | |
| Woody Vine Stratum | | | | | | | |
| Woody Vine Stratum | Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| | | 0 = Total Cover | | | | | |

50/20 Thresholds

| | | |
|-----------------------|-----|-----|
| Tree Stratum | 20% | 50% |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 4 | 10 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | |
|--------------------------|-----------------|---------------|
| OBL species | <u>0</u> x 1 = | <u>0</u> |
| FACW species | <u>0</u> x 2 = | <u>0</u> |
| FAC species | <u>10</u> x 3 = | <u>30</u> |
| FACU species | <u>10</u> x 4 = | <u>40</u> |
| UPL species | <u>0</u> x 5 = | <u>0</u> |
| Column totals | <u>20</u> (A) | <u>70</u> (B) |
| Prevalence Index = B/A = | | <u>3.50</u> |

Hydrophytic Vegetation Indicators:

 Rapid test for hydrophytic vegetation

 Dominance test is >50%

 Prevalence index is ≤3.0*

 Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*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 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? N

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

The corn crop that was planted has been harvested with minimal vegetation present.

SOIL
Sampling Point: S-4

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------|-------|-----------|---------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-7 | 10YR 3/2 | 100 | - | 0 | | | silt loam | |
| -10 | 10YR 3/2 | 90 | 10YR 5/6 | 10 | C | M | silt loam | |
| -24 | 10YR 5/3 | 75 | 7.5YR 5/8 | 25 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) (LRR K, L) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: S-5
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 0 - 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Marshfield silt loam NWI Classification: Deg. Sedge Meadow
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; padding: 10px; min-height: 50px;"> Sample point is located in a small ditch adjacent to an access drive and at the toeslope of the terrace drainage located to the north and west. </div> | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes <u>X</u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> (includes capillary fringe) | Indicators of wetland hydrology present? <u>Y</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 10px; min-height: 40px;"> GIS and Onsite Photos </div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: S-5

| Tree Stratum | | | | | Plot Size (30ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|-----------------------------|--|--|--|---------------------------|--|----|---------------------|---------------------|---------------------|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Sapling/Shrub Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |
| Herb Stratum | | | | | Plot Size (5ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | <i>Setaria pumila</i> | | | | | | 20 | Y | FAC | |
| 2 | <i>Phalaris arundinacea</i> | | | | | | 20 | Y | FACW | |
| 3 | <i>Scirpus cyperinus</i> | | | | | | 5 | N | OBL | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| | | | | | | | 45 | = Total Cover | | |
| Woody Vine Stratum | | | | | Plot Size (15ft radius) | | | Absolute % Cover | Dominant Species | Indicator Status |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| | | | | | | | 0 | = Total Cover | | |

50/20 Thresholds

| | 20% | 50% |
|-----------------------|-----|-----|
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 9 | 23 |
| Woody Vine Stratum | 0 | 0 |

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| | | | |
|--------------------------|-------------|-------|---------|
| OBL species | 5 | x 1 = | 5 |
| FACW species | 20 | x 2 = | 40 |
| FAC species | 20 | x 3 = | 60 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 45 | (A) | 105 (B) |
| Prevalence Index = B/A = | <u>2.33</u> | | |

Hydrophytic Vegetation Indicators:

☒ Rapid test for hydrophytic vegetation

☒ Dominance test is >50%

☒ Prevalence index is ≤3.0*

☐ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

☐ Problematic hydrophytic vegetation* (explain)

*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 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? Y

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

SOIL
Sampling Point: S-5

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|----|----------------|----|-------|-------|-----------|-----------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-5 | 10YR 3/2 | 95 | 10YR 5/6 | 5 | C | PL/M | silt loam | Compacted |
| -20 | 10YR 5/2 | 80 | 7.5YR 5/8 | 20 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

Past grading has occurred.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: UW Board of Regents & City of Marshfield City/County: Wood Sampling Date: 10-28 & 11-4-20
 Applicant/Owner: Applicant: Dan Knoeck, City of Marshfield State: WI Sampling Point: S-6
 Investigator(s): Gary W. Starzinski Section, Township, Range: Sec. 15 & 22, T.25N.-R.3E.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology X significantly disturbed? Yes Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u> | Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) This sample point was taken in an area identified on the offsite aerial photo review. Past experimental terrace grading has occurred in this area and is the cause for "wetness features" on aerial photographs. Uplands are present in these areas. A previously planted corn crop was present prior to the field being harvested. | |

HYDROLOGY

| | |
|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 48%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div> | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4) |
| Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Indicators of wetland hydrology present? <u>N</u> |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">GIS and Onsite Photos</div> | |
| Remarks: | |

VEGETATION - Use scientific names of plants
Sampling Point: S-6

| Tree Stratum | | | | | 50/20 Thresholds | | |
|--|------------------|------------------|------------------|------------------|---|-----|---|
| Plot Size (30ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | 20% | 50% | |
| 1 | | | | | Tree Stratum | 0 | 0 |
| 2 | | | | | Sapling/Shrub Stratum | 0 | 0 |
| 3 | | | | | Herb Stratum | 2 | 5 |
| 4 | | | | | Woody Vine Stratum | 0 | 0 |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | | | 0 = Total Cover | | | |
| Sapling/Shrub Stratum | | | | | Dominance Test Worksheet | | |
| Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | | |
| 1 | | | | | Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) | | |
| 2 | | | | | Total Number of Dominant Species Across all Strata: <u>1</u> (B) | | |
| 3 | | | | | Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B) | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| | | | | 0 = Total Cover | | | |
| Herb Stratum | | | | | Prevalence Index Worksheet | | |
| Plot Size (5ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | | |
| 1 | | | | | Total % Cover of: | | |
| 2 | | | | | OBL species <u>0</u> x 1 = <u>0</u> | | |
| 3 | | | | | FACW species <u>0</u> x 2 = <u>0</u> | | |
| 4 | | | | | FAC species <u>10</u> x 3 = <u>30</u> | | |
| 5 | | | | | FACU species <u>0</u> x 4 = <u>0</u> | | |
| 6 | | | | | UPL species <u>0</u> x 5 = <u>0</u> | | |
| 7 | | | | | Column totals <u>10</u> (A) <u>30</u> (B) | | |
| 8 | | | | | Prevalence Index = B/A = <u>3.00</u> | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | | | 10 = Total Cover | | | |
| Woody Vine Stratum | | | | | Hydrophytic Vegetation Indicators: | | |
| Plot Size (15ft radius) | Absolute % Cover | Dominant Species | Indicator Status | | | | |
| 1 | | | | | <input type="checkbox"/> Rapid test for hydrophytic vegetation | | |
| 2 | | | | | <input checked="" type="checkbox"/> Dominance test is >50% | | |
| 3 | | | | | <input checked="" type="checkbox"/> Prevalence index is ≤3.0* | | |
| 4 | | | | | Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| 5 | | | | | Problematic hydrophytic vegetation* (explain) | | |
| 6 | | | | | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| | | | | 0 = Total Cover | | | |
| Definitions of Vegetation Strata: | | | | | Hydrophytic vegetation present? | | |
| | | | | | <u>Y</u> | | |
| 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 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. | | | | | | | |

Remarks: (Include photo numbers here or on a separate sheet)
 The corn crop that was planted has been harvested with minimal vegetation present.

SOIL**Sampling Point:** S-6

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

| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------|-------|-----------|-----------|
| | Color (moist) | % | Color (moist) | % | Type* | Loc** | | |
| 0-7 | 10YR 3/3 | 100 | - | 0 | | | silt loam | Compacted |
| -10 | 10YR 3/2 | 95 | 10YR 5/6 | 5 | C | M | silt loam | Compacted |
| -24 | 10YR 5/3 | 80 | 7.5YR 5/8 | 20 | C | M | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

Soils have been recently tilled. Additionally, past grading as occurred with the experimental terrace drainage feature.

ATTACHMENT 4

USDA-NRCS WETS TABLES

Table 1 – USDA Field Office Climate Data – WETS Table

Table 2 – USDA Field Office Climate Data – 2020 Monthly Results of Precipitation

Table 3 – USDA Field Office Climate Data – One Week Precipitation

Table 4 – Hydrologic Determination

USDA Field Office Climate Data

WETS Table 1 for MARSHFIELD EXP FARM

| WETS Station: MARSHFIELD EXP FARM | | | | | | | | |
|-----------------------------------|--------------|--------------|---------------|-------------|-----------------------------|-----------------------------|---|--------------|
| Requested years: 1971-2000 | | | | | | | | |
| Month | Avg Max Temp | Avg Min Temp | Avg Mean Temp | Avg Precip. | 30% chance Precip less than | 30% chance Precip more than | Avg number days with 0.10 inches or more precip | Avg Snowfall |
| Jan | 23.1 | 4.0 | 13.6 | 0.98 | 0.59 | 1.19 | 3 | 11.9 |
| Feb | 29.3 | 10.0 | 19.7 | 0.88 | 0.47 | 1.06 | 3 | 8.0 |
| Mar | 40.4 | 20.7 | 30.6 | 1.95 | 1.11 | 2.37 | 4 | 9.1 |
| Apr | 56.3 | 32.8 | 44.6 | 2.94 | 1.98 | 3.52 | 6 | 3.0 |
| May | 69.7 | 44.0 | 56.8 | 3.70 | 2.65 | 4.37 | 7 | 0.0 |
| Jun | 78.0 | 53.0 | 65.5 | 4.14 | 2.48 | 5.02 | 8 | 0.0 |
| Jul | 81.9 | 57.6 | 69.8 | 4.06 | 2.57 | 4.89 | 8 | 0.0 |
| Aug | 79.9 | 55.8 | 67.9 | 4.31 | 2.99 | 5.12 | 7 | 0.0 |
| Sep | 70.8 | 47.1 | 58.9 | 4.03 | 2.27 | 4.90 | 7 | 0.0 |
| Oct | 58.7 | 36.5 | 47.6 | 2.49 | 1.66 | 2.99 | 6 | 0.6 |
| Nov | 41.0 | 24.2 | 32.6 | 2.29 | 1.12 | 2.80 | 5 | 5.7 |
| Dec | 27.3 | 10.3 | 18.8 | 1.29 | 0.72 | 1.58 | 4 | 12.0 |
| Annual: | | | | | 29.91 | 35.36 | | |
| Average | 54.7 | 33.0 | 43.9 | - | - | - | - | - |
| Total | - | - | - | 33.05 | | | 67 | 50.3 |

Monthly Total Precipitation Table 2 for MARSHFIELD EXP FARM

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|------|------|------|------|------|------|------|------|------|------|------|------|-----|--------|
| 2020 | 1.02 | 0.59 | 3.36 | 1.69 | 4.16 | 4.48 | 3.65 | 3.79 | 2.39 | 2.78 | 2.26 | - | - |

One Week Precipitation Table 3 for MARSHFIELD EXP FARM

| Date | 10/21 | 10/22 | 10/23 | 10/24 | 10/25 | 10/26 | 10/27 | Total |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Daily Precip.(in) | 0.61 | 0.00 | 0.72 | 0.02 | 0.00 | 0.06 | 0.00 | 1.41 |

Product generated by ACIS - NOAA Regional Climate Centers.

Table 1, Table 2 and Table 3

**HYDROLOGIC DETERMINATION
ON THE
U.W. BOARD OF REGENTS & CITY OF MARSHFIELD PROPERTY**

| Month | 3 yrs. in 10 less than | Normal | 3 yrs. in 10 more than | 2020 Rainfall | Condition dry, wet, normal | Condition Value | Month Weight Value | Product of previous two columns |
|-----------|---------------------------|--------|---------------------------|------------------|-------------------------------|--------------------|-----------------------|------------------------------------|
| September | 2.27 | 4.03 | 4.90 | 2.39 | Normal | 2 | 3 | 6 |
| August | 2.99 | 4.31 | 5.12 | 3.79 | Normal | 2 | 2 | 4 |
| July | 2.57 | 4.06 | 4.89 | 3.65 | Normal | 2 | 1 | 2 |
| | | | | | | | Sum | 12 |

Note: If sum is:

6 to 9 = Drier than Normal
10 to 14 = Normal
15 to 18 = Wetter than Normal

Condition Value:

Dry = 1
Normal = 2
Wet = 3

ATTACHMENT 5

ONSITE PHOTOGRAPHS

U.W. Board of Regents & City of Marshfield Properties



SE Project Corner Looking North



East Yellowstone Drive Looking West



End of Wetland Boundary Near SE Project Corner



Wetland Area 9



G-2 to G-1



Hydric Topsoil at G-2

U.W. Board of Regents & City of Marshfield Properties



East Project Boundary Looking South



F-1 Looking West



F-1 Looking North



End of Wetland Boundary (W8)



Driveway/Grassy Swale Looking West



C-1

U.W. Board of Regents & City of Marshfield Properties



S-5



E-2



Driveway Looking East



Driveway Looking West



Artificially Dug Pond



Grassy Swale Looking West

U.W. Board of Regents & City of Marshfield Properties



Start of Hardwood Swamp Wetland



End of Hardwood Swamp Wetland



Hardwood Swamp



Grassy Swale Looking North



North Project Boundary Looking East



Upland Field Along West Project Boundary

U.W. Board of Regents & City of Marshfield Properties



Grassy Swale Looking East



Grassy Swale Looking South



Access Driveway Looking South



East Project Boundary Looking South



USDA Buildings Adjacent to Subject Property



UW Madison Buildings Adjacent to Subject Property

U.W. Board of Regents & City of Marshfield Properties



Wetland Area 1 and West Project Boundary



Wetland Area 1 to North



Hydric Soil at A-2



A-2



Wetland Boundary Looking South



Non-Hydric Soil at A-1

U.W. Board of Regents & City of Marshfield Properties



A-1



Wetland Area 2 Looking East



Wetland Area 2 Looking South



Wetland Area 2 Looking South

ATTACHMENT 6

OFFSITE AERIAL PHOTO REVIEW

Field data sheet reference (if applicable): _____

Project Name: UW Board of Regents & City of Marshfield Date: 10-22-20 County: Wood

Investigator: Gary W. Starzinski Legal Description (T, R, S): T.25N. R.3E. Sec. 15 & 22

| Date Image Taken (M-D-Y) | Image Source | Climate Condition (wet, dry, normal)ⁱ | Image Interpretation(s) | | | | |
|---|---------------------|---|--------------------------------|---------|---------|---------|-------|
| | | | Area: A | Area: B | Area: C | Area: D | Area: |
| 1998 | Google Earth | Dry | NSS | NSS | NSS | NSS | |
| | | | | | | | |
| 2005 | Google Earth | Dry | NSS | SS | NSS | AP | |
| | | | | | | | |
| 2006 | Google Earth | Dry | NSS | NSS | NSS | NSS | |
| | | | | | | | |
| 2007 | Google Earth | Wet | AP | AP | NSS | SS | |
| | | | | | | | |
| 2008 | Google Earth | Dry | NSS | NSS | NSS | NSS | |
| | | | | | | | |
| 2010 | Google Earth | Wet | AP | AP | AP | AP | |
| | | | | | | | |
| 2013 | Google Earth | Wet | CS | CS | CS | CS | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Normal Climate Condition | | | Area: A | Area: B | Area: C | Area: D | Area: |
| Number | | | 7 | 7 | 7 | 7 | |
| Number with wet signatures | | | 3 | 4 | 2 | 4 | |
| Percent with wet signatures | | | 43% | 57% | 29% | 57% | |

| | | |
|---------------------------------------|-----------------------------|---------------------------------|
| WS - wetland signature | SS - soil wetness signature | CS - crop stress |
| NC - not cropped | AP - altered pattern | NV - normal vegetative cover |
| DO - drowned out | SW - standing water | NSS – no soil wetness signature |
| Other labels or comments: D - Ditched | | |

- Use above key to label image interpretations. It is imperative that the reviewer read and understand the guidance associated with the use of these labels. If alternate labels are used, indicate in box above.
- If less than five (5) images taken during normal climate conditions are available, use an equal number of images taken during wet and dry climate conditions and use as many images as you have available. Describe the results using this methodology in your report.

ⁱ Use [MN State Climatology website](#) to determine climate condition when image was taken.

Wetland Determination from Aerial Imagery – Recording Form

Project Name: UW Board of Regents & City of Marshfield Date: 10-22-20 County: Wood

Investigator: Gary W. Starzinski Legal Description (T, R, S): T.25N. R.3E. Sec. 15 & 22

Use the Decision Matrix below to complete Table 1.

| Hydric Soils present ¹ | Identified on NWI or other wetland map ² | Percent with wet signatures from Exhibit 1 | Field verification required ³ | Wetland? |
|-----------------------------------|---|--|--|--|
| Yes | Yes | >50% | No | Yes |
| Yes | Yes | 30-50% | No | Yes |
| Yes | Yes | <30% | Yes | Yes, if other hydrology indicators present |
| Yes | No | >50% | No | Yes |
| Yes | No | 30-50% | Yes | Yes, if other hydrology indicators present |
| Yes | No | <30% | No | No |
| No | Yes | >50% | No | Yes |
| No | Yes | 30-50% | No | Yes |
| No | Yes | <30% | No | No |
| No | No | >50% | Yes | Yes, if other hydrology indicators present |
| No | No | 30-50% | Yes | Yes, if other hydrology indicators present |
| | | | | |
| No | No | <30% | No | No |

¹ The presence of hydric soils can be determined from the “Hydric Rating by Map Unit Feature” under “Land Classifications” from the Web Soil Survey. “Not Hydric” is the only category considered to not have hydric soils. Field sampling for the presence/absence of hydric soil indicators can be used in lieu of the hydric rating if appropriately documented by providing completed field data sheets.

² At minimum, the most updated NWI data available for the area must be reviewed for this step. Any and all other local or regional wetland maps that are publically available should be reviewed.

³ Area should be reviewed in the field for the presence/absence of wetland hydrology indicators per the applicable 87 Manual Regional Supplement, including the D2 indicator (geomorphic position).

Table 1.

| Area | Hydric Soils Present | Identified on NWI or other wetland map | Percent with wet signatures from Exhibit 1 | Other hydrology indicators present ¹ | Wetland? |
|------|----------------------|--|--|---|-----------|
| A | No | No | 43% | Yes | Partially |
| B | No | No | 57% | Yes | Partially |
| C | No | No | 29% | No | No |
| D | No | No | 57% | No | No |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

¹ Answer “N/A” if field verification is not required and was not conducted.

UW Board of Regents & City of Marshfield Properties

1998 Aerial Photograph

Legend



UW Board of Regents & City of Marshfield Properties

2005 Aerial Photograph

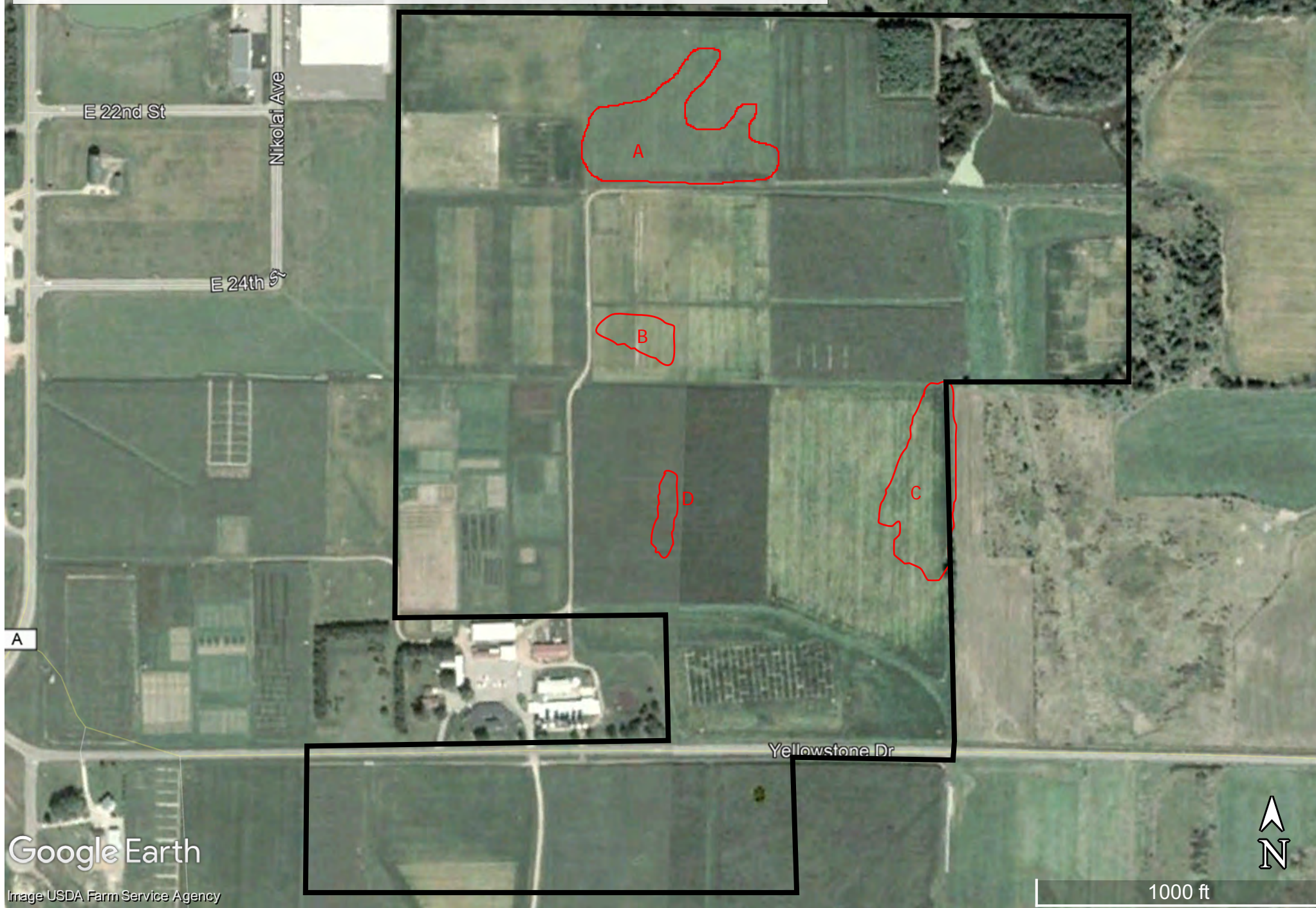
Legend



UW Board of Regents & City of Marshfield Properties

2006 Aerial Photograph

Legend



UW Board of Regents & City of Marshfield Properties

2007 Aerial Photograph

Legend



Google Earth

Image © 2020 Maxar Technologies

UW Board of Regents & City of Marshfield Properties

2008 Aerial Photograph

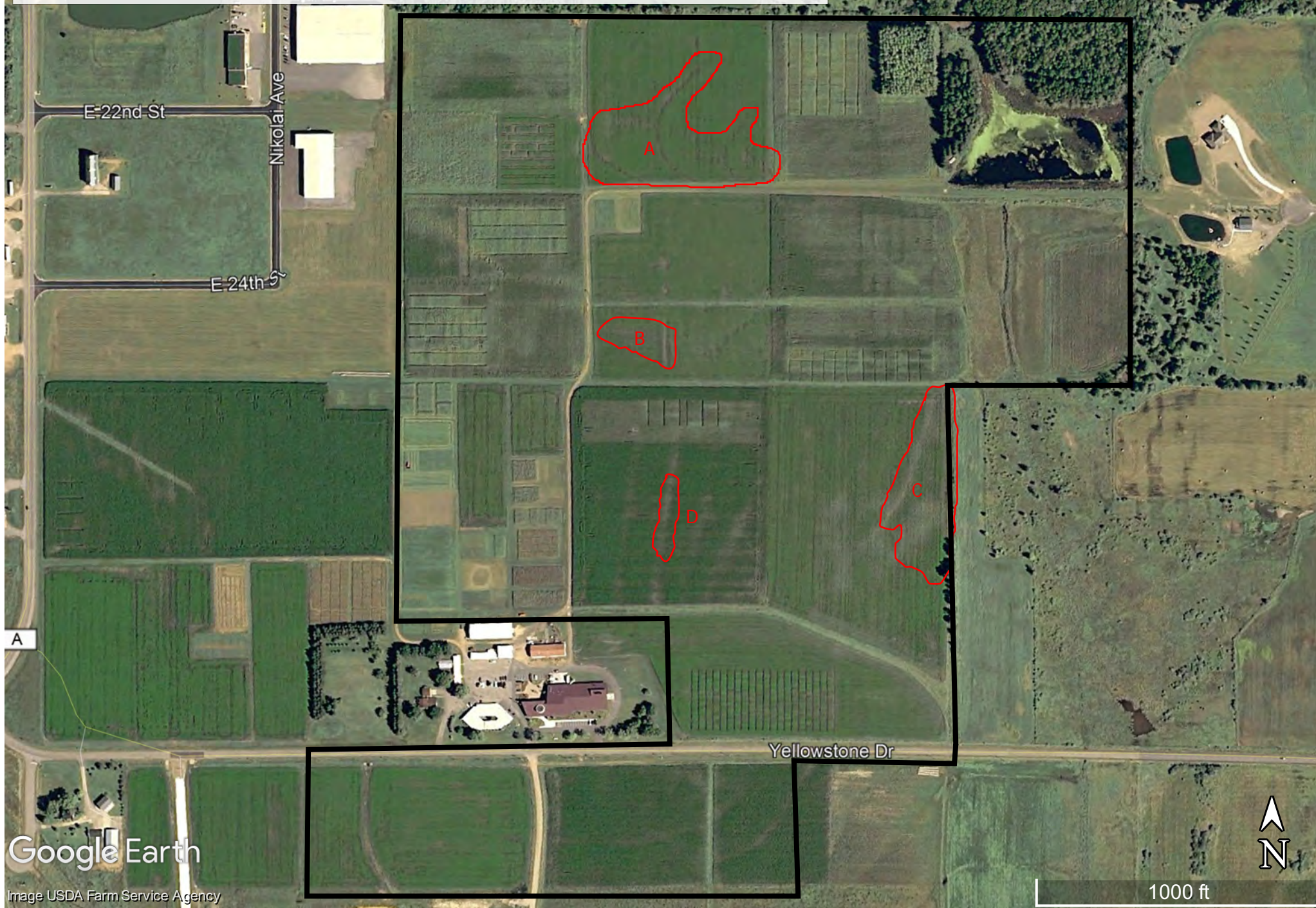
Legend



UW Board of Regents & City of Marshfield Properties

2010 Aerial Photograph

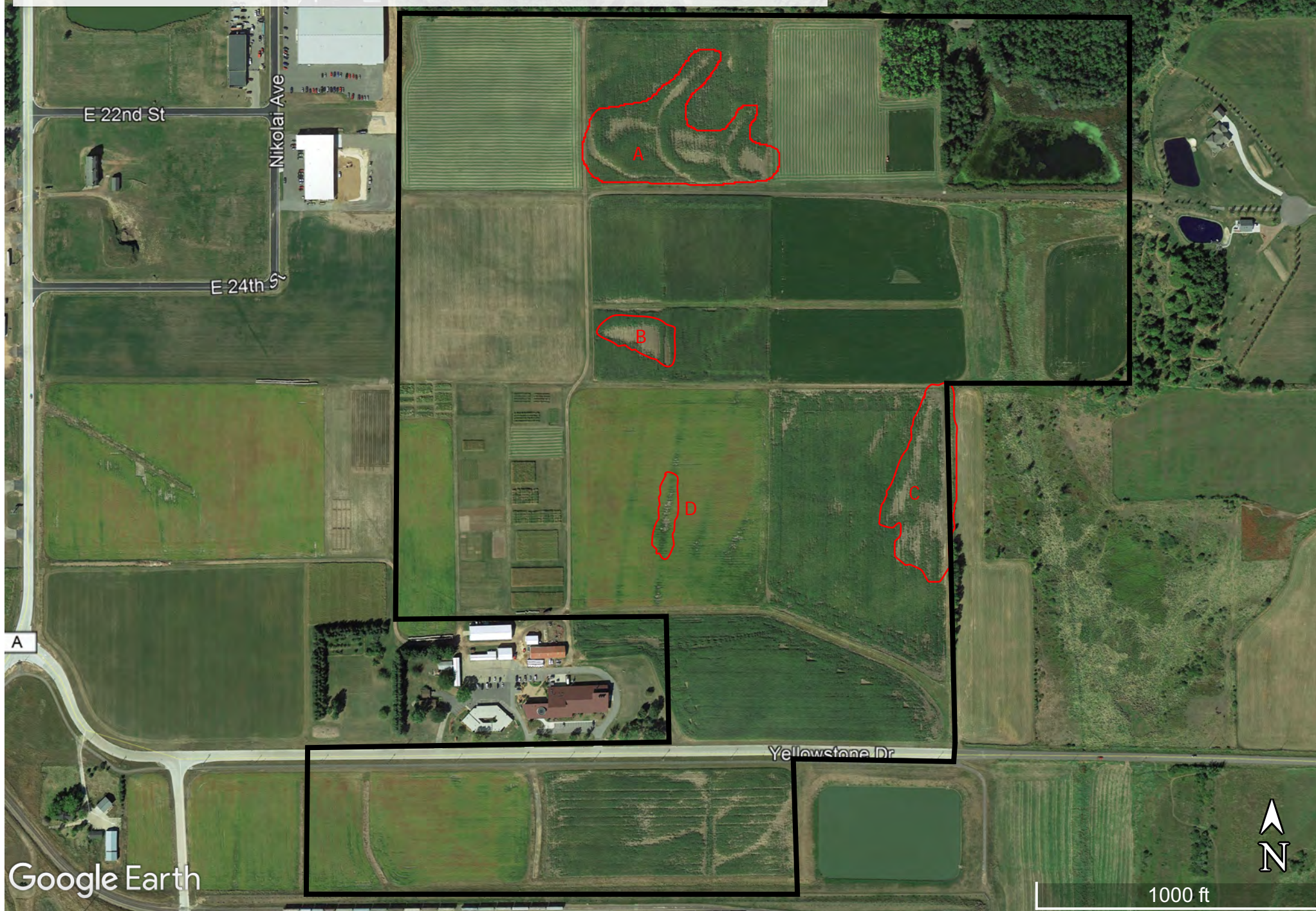
Legend



UW Board of Regents & City of Marshfield Properties

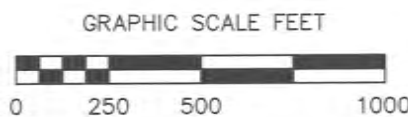
2013 Aerial Photograph

Legend



ATTACHMENT 7

PREVIOUS WETLAND DELINEATION INFORMATION



| Revisions | | | | | |
|-----------|------|---------|-----|------|---------|
| No. | Date | Remarks | No. | Date | Remarks |
| | | | | | |
| | | | | | |
| | | | | | |



VIERBICHER
ASSOCIATES
Committed to Quality Service Since 1976

REEDSBURG

MADISON

PRAIRIE DU CHIEN

400 Viking Drive

Reedsburg, Wisconsin 53959

Phone: (608) 524-6468

Fax: (608) 524-8218

Marshfield Yellowstone Industrial Park
Wetland Delineation Map
Marshfield, Wisconsin

| | |
|-----------------|---------------|
| Drafter/Checker | Project # |
| Gwoo | 013076038 |
| Scale | Date |
| AS SHOWN | December 2007 |

| Sheet | Drawing Number |
|-------|----------------|
| 1 / 1 | 13MF- 2-2 |

ATTACHMENT 8

RESUME'

Résumé' of Qualifications
Gary W. Starzinski
Licensed Professional Soil Scientist
Professional Wetland Delineator
President, Star Environmental, Inc.
705 Third Street, P.O. Box 434
Marathon, WI 54448
Telephone: 715-443-6115
Cell: 715-571-0829 Fax: 715-443-6108
Email: starenvironmental@hotmail.com
Website: starenvironmentalinc.com

Experience: **Star Environmental, Inc., President**

State of Wisconsin Licensed Professional Soil Scientist,) Professional Wetland Delineator and Recognized United States Army Corps of Engineering with over 40 years of professional experience in the soils and wetland disciplines, completing over 2000 wetland delineations and over 10,000 Soil and Site Evaluations in over 50 Wisconsin Counties. Mapping over 200,000 acres for the United States Department of Agriculture-Natural Resources Conservation Service National Cooperative Soil Survey and participates in soils and wetland training programs, annually.

Star Environmental, Inc. is a consulting firm offering services in wetland delineations, mitigation, restorations, wetland mitigation banking, WDNR project permit assistance, GPS surveying, soil and site evaluations for septic systems and stormwater management practices, soil erosion control and habitat restoration, non-metallic mining permit assistance, phase 1 environmental site assessments, soil characterization and morphological studies, soil survey mapping and comprehensive land resource planning.

Education: B.S. – Soil Science, May 1975 University of Wisconsin Stevens Point

Qualifications: Licensed Professional Soil Scientist, State of Wisconsin Department of Safety and Professional Services

Professionally Assured Wetland Delineator, Wisconsin Department of Natural Resources (WDNR)

ARCPACS Certified Professional Soil Scientist, American Society of Agronomy

Certified Environmental Inspector, Environmental Assessment Association

Certified Soil Tester, State of Wisconsin

Member of the State of Wisconsin Standards Oversight Council for Stormwater 1002 Soil and Site Evaluations

Past President of the Wisconsin Society of Professional Soil Scientists