Assured Wetland Delineation Report

4908 Pierceville Road

Town of Sun Prairie, Dane County, Wisconsin

Stantec Project #:193708475

Lead Delineator: Kate Remus

August 26, 2021

Prepared for:

Todd Justmann
4908 Pierceville Road
Cottage Grove, WI 53527

Prepared by:

Stantec Consulting Services Inc.
209 Commerce Parkway
PO Box 128
Cottage Grove, WI 53527
Phone: (608) 839-1998

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LIST OF APPENDICES

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) performed a wetland delineation of the Justmann property at 4908 Pierceville Road (the "Study Area") on behalf of Todd Justmann. The wetland delineation was completed by Kate Remus of Stantec, an assured delineator qualified via the Wisconsin Department of Natural Resources (WDNR) Wetland Delineation Assurance Program, on August 12, 2021 (see Appendix A for Delineator Qualifications).

The Study Area is approximately 3.7 acres in size and located in Section 35, Township 8 North, Range 11 East, Town of Sun Prairie, Dane County, Wisconsin. Specifically, the Study Area is east of Pierceville Road, approximately one mile east of the intersection of Pierceville Road and County Trunk Highway TT (CTH TT) (Appendix B, Figure 1). The purpose and objective of the wetland determination and delineation was to identify the extent and spatial arrangement of wetlands, as well as to identify potentially jurisdictional waterways, within the Study Area.

Wetland and waterways may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the WDNR, and local regulation under jurisdiction of the local county, town, city, or village. Stantec recommends this report be submitted to local authorities, the WDNR, and USACE for final jurisdictional review. Delineations completed by a WDNR Assured Delineator do not need to obtain WDNR concurrence.

2.0 METHODS

2.1 WETLANDS

Wetland delineations were based on the criteria and methods outlined in the *Corps of Engineers Wetlands Delineation Manual,* Technical Report Y-87-1 (1987) and subsequent guidance documents, and applicable Regional Supplements to the *Corps of Engineers Wetland Delineation Manual*.

The wetland delineation involved the use of available resources to assist in the assessment such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey, WDNR Wisconsin Wetland Inventory (WWI) mapping, and aerial photography.

The on-site wetland delineation was made using the three criteria (vegetation, soil, and hydrology) and technical approach defined in the USACE 1987 Manual and applicable Regional Supplement. According to procedures described in the 1987 Manual and applicable Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

As recent weather patterns influence the visibility and presence of some wetland hydrology indicators, the antecedent precipitation in the three months leading up to the field investigation was reviewed. The current year's precipitation data were compared to the most recent long-term (30-year) precipitation averages and standard deviation to determine if precipitation was normal, wet, or dry for the area using a WETS analysis as developed by the NRCS.

The wetland boundary and sampling points were identified and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software. The wetland boundary was flagged with pink pin flags in the field.

2.2 WATERWAYS

Review of waterway characteristics and determination of navigability and jurisdiction was beyond the scope of the investigation. However, if observed, waterways, waterbodies, culverts, and/or other connections to off-site wetland or aquatic features that may be under federal or state authority were surveyed using a GPS and mapped using GIS software.

3.0 RESULTS

3.1 SITE DESCRIPTION

The Study Area is a residential property that includes a house and wooded yard in the western third of the property, woodland in the middle third, with an early successional irregularly mowed grassy field and wet meadow wetland in the eastern third of the property. There is a gravel pad over an area of graded fill just east of the eastern woodland edge and a large brush pile within the wetland area. The property follows a gradual west-east slope from topographic highs of approximately 900 feet above mean sea level (msl) at Pierceville Road near the western property boundary to approximately 870 feet msl near the eastern property boundary. The Study Area is bordered by similar wooded residential properties to the north and south, Pierceville Road to the west, and open undeveloped land to the east.

Soils present within the Study Area and their hydric status are summarized in Table 1. Wetlands identified during the field investigation are located primarily within areas mapped as predominantly hydric soils and very poorly drained wetland indicator soils (Appendix B, Figures 2 and 3).

Table 1. Summary of Soils Identified within the Study Area

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
DnB: Dodge silt loam, 2 to 6 percent slopes	Dodge	80-95	Drumlins	No
	St. Charles	3-10	Drumlins	No
	Mayville	2-7	Drumlins	No
	Lamartine	0-3	Drumlins	No
Ho: Houghton muck	Houghton	100	Depressions on stream terraces	Yes
SaA: Sable silty clay loam, 0 to 2 percent slopes	Sable	85-100	Swales	Yes
	Ipava	0-7	Ground moraines	No
	Muscatune	0-6	Ground moraines	No
	Buckhart	0-4	Knolls	No
	Elburn	0-3	Outwash plains	No
ScB: St. Charles silt loam, 2 to 6 percent slopes	St. Charles	80-90	Till plains	No
	St. Charles-Moderately well drained	5-10	Till plains	No
	Virgil	3-5	Till plains	No
	Pella	2-5	Drainageways	Yes

The WWI map identifies one wetland area within the eastern third of the Study Area that extends beyond the Study Area to the north, east, and south (Appendix B, Figure 4). The field delineated wetland is within the same vicinity as the wetland area identified on the WWI map (Appendix B, Figure 5).

3.2 CLIMATIC CONDITIONS

Average precipitation for the investigation area was obtained from the Dane County Regional Airport WETS weather station located in Madison, WI and used for the WETS analysis. A total of 8.38 inches of precipitation occurred in the three-month time period prior to the field investigation in 2021 compared to the long-term average of 13.68 inches. Based on the WETS analysis, conditions were drier than normal (Appendix C). No rain fell between August 1-4, 2021, but between August 5-11, 2.15 inches of precipitation was recorded. Field conditions were still considered drier than normal despite the rain immediately preceding the field investigation as wetland hydrology was only observed at one of the sample points completed within W1 despite similar landscape position and soil profiles.

3.3 WETLANDS

One wetland was identified and delineated within the Study Area. Wetland determination data forms were completed for five sample points along transects through the wetland and adjacent upland and are included in Appendix D. Photographs of the wetlands and Study Area context are included in Appendix E. The wetland boundary and sample point locations are shown on Figure 5 (Appendix B). The wetland is summarized in Table 2 below and described in detail in the following sections.

Table 2. Summary of Wetlands Identified within the Study Area

Wetland ID	Observed Wetland Type*	Mapped WWI Wetland Type**	Adjacent Surface Waters	Acreage (on-site)
W1	Fresh (wet) meadow	E1Kg	Intermittent waterway mapped in 24K hydro layer through wetland east of the Study Area	0.86

*Wetland type based on Eggers & Reed, 2014
**Mapped WWI wetland may or may not correspond to field observed wetland type

3.3.1 Wetland 1

Wetland 1 (W1) is a degraded wet meadow community within the eastern quarter of the Study Area that is irregularly mowed and contains a large brush pile and trees along the eastern property boundary. The wetland appears to continue off-site to the north, south, and east. W1 appears to be directly connected to an unnamed intermittent waterway located outside the Study Area to the east that is identified on the 24k hydro layer mapped by USGS (Figure 1, Appendix A) and visible in the WDNR 24k hydrography layer (Figure 4, Appendix A). The unnamed intermittent waterway associated with W1 flows south and eventually discharges to Koshkonong Creek. Koshkonong Creek flows to Lake Koshkonong which discharges to the Rock River.

Vegetation

The dominant plant species identified at sample points completed within W1 was reed canary grass (*Phalaris arundinacea*, FACW). Other common species identified in the wetland are listed on the data forms included in Appendix B. The dominant species within the wetland are comprised mostly of hydrophytic vegetation (OBL, FACW, and/or FAC) and meet the hydrophytic vegetation criterion.

Hydrology

The wetland appears to have a seasonally saturated hydroperiod. Primary indicators of wetland hydrology were only observed at sample point SP4 and included High Water Table (A2) and Saturation within the upper 12 inches (A3). Secondary indicators of wetland hydrology observed at both sample points SP1 and SP4 included Geomorphic Position (D2) and a positive FAC-Neutral Test (D5), and Dry-Season Water Table at SP4. Therefore, the wetland hydrology criterion was met.

Soils

Soils within the wetland are mapped by the NRCS as Houghton muck (Ho) (Figure 2, Appendix A). The soils observed at the sample points were consistent with the Houghton series characteristics. Field indicators of hydric soil identified at sample points SP1 and SP4 consisted of NRCS field Indicators A1-Histosol, A3-Black Histic, and A12-Thick Dark Surface. Therefore, the hydric soil criterion was satisfied.

3.3.2 Wetland Boundary

The wetland boundary was determined based on distinct differences in vegetation, hydrology, soils, and topography consisting of the following: 1) Transition from a wet meadow wetland community dominated by reed canary grass to an early transitional open grassy upland community dominated by red clover (*Trifolium pratense,* FACU), Queen Anne's-lace (*Daucus carota,* UPL); barnyard grass (*Echinochloa crus-galli,* FAC), giant foxtail (*Setaria faberi,* FACU), and a reduced footprint of reed canary grass; 2) Transition from an area exhibiting wetland hydrology indicators within the wetland to a lack of wetland hydrology indicators within the adjacent upland; and 3) Transition from soils exhibiting hydric soil indicators to soils lacking indicators of hydric soil conditions. The transition from wetland to upland characteristics generally correlated with a subtle topographic break.

3.4 UPLANDS

Upland within the Study Area consists of a house and wooded yard in the western third of the property at the highest elevations, disturbed upland woodland following the slope in the middle third of the property, and an early successional grassy field adjacent to the field identified wetland in the eastern third of the property. The woodland contains various oaks (*Quercus* spp.) and black cherry (*Prunus serotina*, FACU) with box elder (*Acer negundo,* FAC) and Siberian elm (*Ulmus pumila,* FACU) in the canopy over common buckthorn (*Rhamnus cathartica,* FAC), multiflora rose (*Rosa multiflora,* FACU), honeysuckle (*Lonicera* spp.), and common blackberry (*Rubus alleghaniensis,* FACU) in the shrub layer. Most of the upland grassy field just east of the woodland edge contains a gravel pad over an area of graded fill that slopes down to the wetland area. The area of grading/fill grades into the natural elevation contours to the north and south and ranges from one to three feet above the wetland area to the east. Along the fill slope and in areas unaffected by the grading/fill, common vegetation included red clover, common plantain (*Plantago major,* FACU), Queen Anne's-lace, barnyard grass, reed canary grass, black medic (*Medicago lupulina,* FACU), giant foxtail, and various thistles (*Cirsium* spp). There was a noticeable transition from upland to wetland vegetation, with reed canary grass becoming dominant in the wetland and the upland forb species mostly absent.

As would be expected based on the NRCS soil data, hydric soils were observed at sample points SP2 and SP3 where fill materials were not present, with very dark soils over a depleted layer. While NRCS Field Indicators of Hydric Soil were observed at these sample points, conditions were determined to be relic and non-wetland due to the lack of wetland hydrology and dominance of non-hydrophytic vegetation. Hydrology conditions on site are likely impacted by the lateral effect of ditched waterways east and south of the Study Area, as well as subsurface drain tile that is likely present on neighboring properties. In general, upland areas were determined to be non-wetland based on the lack of wetland hydrology, hydric soils, hydrophytic

vegetation, and an elevated location in the landscape that lacked suitable geomorphic position for wetland conditions to exist.

3.5 WATERWAYS

One waterway is mapped by USGS and the WDNR 24K hydrography layer (WDNR Water Body Identification Code 5035047) outside of the Study Area to the east. No waterways are mapped by the USGS or WDNR 24k hydrography layer within the Study Area and no waterways were observed during the on-site field investigation.

3.6 OTHER ENVIRONMENTAL CONSIDERATIONS

This report is limited to the identification of state and/or federally regulated wetlands and waterways within the Study Area. However, there may be other regulated features within the Study Area, including, but not limited to, historical or archeological features, endangered or threatened species, navigable waters, shoreland zones, and/or floodplains, etc. Federal, state, and local units of government and regional planning organizations may have regulatory authority to control or restrict land uses within or in close proximity to these features.

Specifically, in the state of Wisconsin, Wis. Adm. Code NR 151.12 requires that a “protective area” or buffer be determined from the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands. In accordance with NR 151.12, the width of the “protective area” for less susceptible wetlands is determined by using 10% of the average wetland width, no less than 10 feet or more than 30 feet. Moderately susceptible wetlands, lakes, and perennial and intermittent streams identified on USGS topographic maps or NRCS county soil survey maps (whichever is more current) require a protective buffer of 50 feet, and outstanding or exceptional resource waters, highly susceptible wetlands, and wetlands in areas of special natural resource interest require protective buffers of 75 feet. The jurisdictional authority on wetland buffers rests with the WDNR. Local zoning authorities and/or a regional planning organization may have more restrictive buffers from wetlands than that imposed under NR 151.

4.0 CONCLUSION

Stantec performed a wetland delineation of the Justmann property at 4908 Pierceville Road on behalf of Todd Justmann. The approximately 3.7 acres Study Area is located in Section 16, Township 8 North, Range 11 East, Town of Sun Prairie, Dane County, Wisconsin. The purpose and objective of the wetland delineation was to identify wetlands and potentially jurisdictional waterways within the Study Area.

One wetland totaling 0.86 acre was identified and delineated within the Study Area in accordance with state and federal guidelines and were subsequently flagged, surveyed with GPS, and mapped using GIS software. The wetland is comprised of fresh (wet) meadow and adjacent uplands are composed of early successional grassland.

The wetlands identified in this report may be subject to federal regulation under the jurisdiction of USACE, state regulation under the jurisdiction of the WDNR, and local regulation under jurisdiction of the local county, town, city, or village. Stantec recommends this report be submitted to local authorities, the WDNR, and USACE for final jurisdictional review.

Prior to beginning work at this site or disturbing or altering wetlands, waterways, or adjacent lands in any way, Stantec recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regard to the proposed work to comply with applicable regulations.

The information provided by Stantec regarding wetland boundaries is a scientific-based analysis of the wetland and upland conditions present within the Study Area at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland boundaries rests with the USACE and, in some cases, the WDNR or a local unit of government. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to recent precipitation patterns and the season of the year. In addition, the physical characteristics of the Study Area can change over time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands within the Study Area.

5.0 REFERENCES

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WDNR 24K Hydro Full File Geodatabase (Updated May 10, 2018). [24k hydrography geospatial data layers]. Available online: https://data-wi-dnr.opendata.arcgis.com/datasets?t=water

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Appendix A DELINEATOR QUALIFICATIONS

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1300 W Clairemont Avenue
Eau Claire, WI 54701

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

March 22, 2021

Kate Remus
Stantec
209 Commerce Parkway
P.O. Box 128
Cottage Grove, WI 53527

Subject: 2021 Assured Wetland Delineator Confirmation

Dear Ms. Remus:

This letter provides Wisconsin Department of Natural Resources (WDNR) confirmation for the wetland delineations you conduct during the 2021 growing season. You and your clients will not need to wait for the WDNR to review your wetland delineations before moving forward with project planning. This will help expedite the review process for WDNR's wetland regulatory program. Your name and contact information will continue to be listed on our website at: http://dnr.wi.gov/topic/wetlands/assurance.html.

In the instance where a municipality may require a letter of confirmation for your work prior to moving forward in the local regulatory process, this letter shall serve as that confirmation. Although your wetland delineations do not require WDNR field review, inclusion of a Wetland Delineation Report is required for projects needing State authorized wetland, waterway and/or storm water permit approvals.

If you or any client has a question regarding your status in the Wetland Delineation Professional Assurance Program, contact me by email at kara.brooks@wisconsin.gov or phone at 414-308-6780. Thank you for all your hard work and best wishes for the upcoming field season.

Sincerely,

Kara Brooks
Wetland Identification Coordinator
Bureau of Watershed Management

Kate Remus PWS

Environmental Scientist · 14 Years of Experience · Cottage Grove, Wisconsin

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Kate is an environmental scientist specializing in wetland and biological inventory work, and environmental planning and permitting support . Kate's experience includes wetland delineations and assessments, habitat assessments, rare species surveys and endangered resources reviews, watershed assessments, and invasive species inventory and management. She has experience working with a variety of clients across the private, municipal, and government sectors on a wide-range of projects, from small to large-scale.

EDUCATION

Master of Science, Water Resource Management, University of Wisconsin, Madison, Wisconsin, 2010

Bachelor of Science, Forestry Major (Ecosystem Restoration & Management), Soil Science Minor, University of Wisconsin, Stevens Point, Wisconsin, 2006

CERTIFICATIONS & TRAINING

Sedges: Identification and Ecology, UW-Milwaukee Field Station, Cedarburg, Wisconsin, 2014

Certified S130/S190 Wildland Fire, Stevens Point, Wisconsin, 2006

Wetland Delineation Training, Wetland Training Institute, Wisconsin, 2010

Certified Endangered Resources Reviewer, Wisconsin Department of Natural Resources, Wisconsin, 2011

Advanced Wetland Delineation, UW-La Crosse Extension, La Crosse, Wisconsin, 2012

Critical Methods in Wetland Delineation, UW-La Crosse Extension (2014-2021), Madison, Wisconsin, 2021

Karner Blue Butterfly HCP Monitoring - 2016, 2021, Department of Natural Resources, Wisconsin, 2021

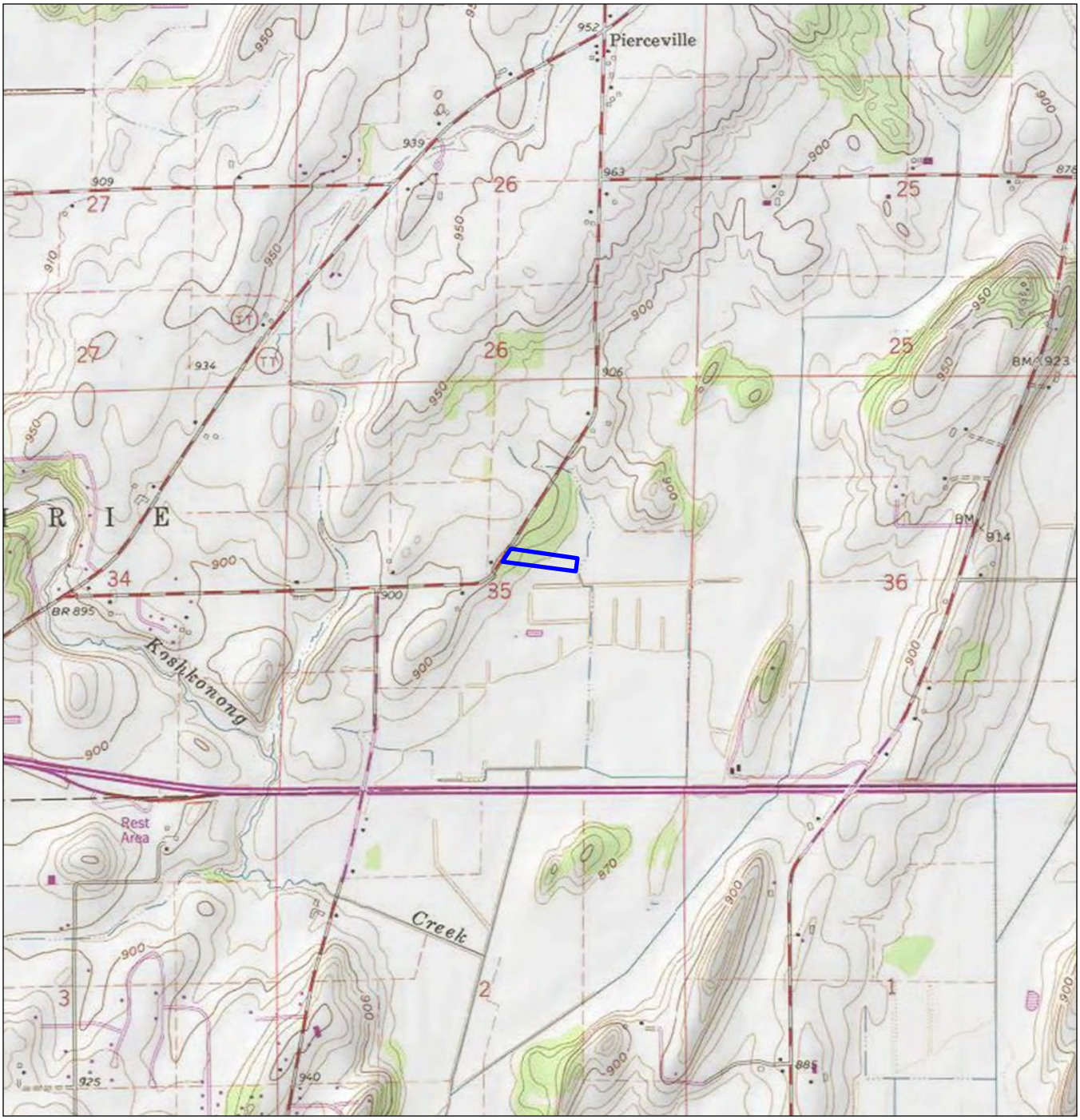
Wetland Plant Identification, Wetland Training Institute, Wisconsin, 2011

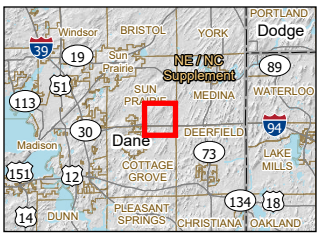
Assured Wetland Delineator, Wetland Delineation Professional Assurance Program, Wisconsin Department of Natural Resources, WI, United States, 2019

REGISTRATIONS

Professional Wetland Scientist #2973, Society of Wetland Scientists Certification Program, 2018

Appendix B FIGURES





Legend

Project Boundary

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Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, WDNR, WisDOT
3. Background: USGS 7.5' Topographic Quadrangles

Stantec

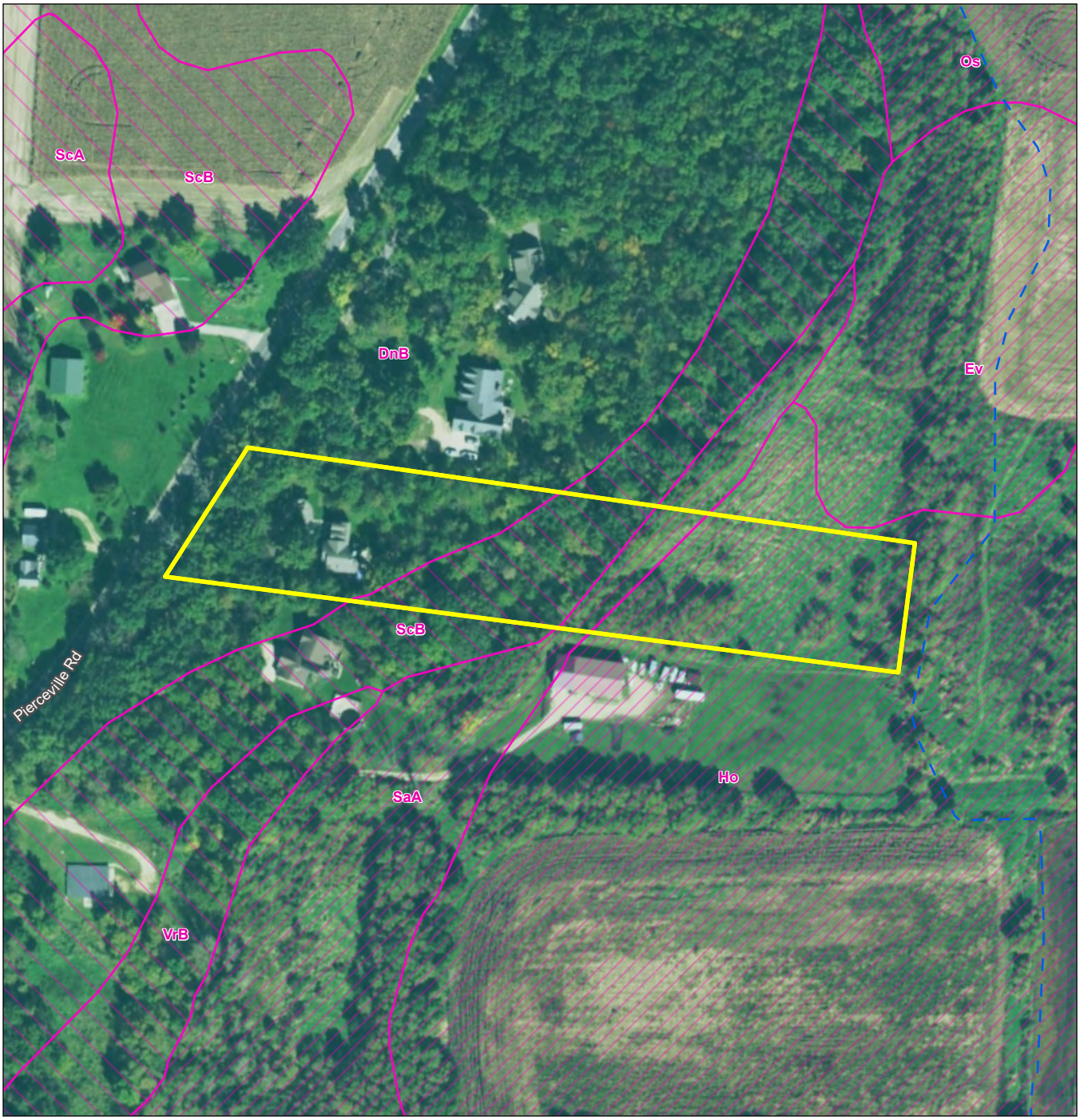
Project Location
T8N, R11E, S35,
T. of Sun Prairie, Dane Co., WI

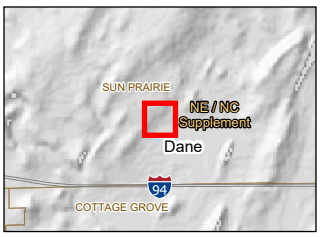
Prepared by JM on 2021-08-02
TR by RA on 2021-08-05
IR by KR on 2021-08-23

Client/Project 193708475
Todd Justmann
Justmann Wetland Determination

Figure No.
1

Title
Project Location and Topography





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1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, WDNR, WisDOT, NRCS
3. Background: 2018 NAIP

Legend
- Project Boundary

NRCS Soil Survey Data
Hydric Soil Rating
- Predominantly Hydric Soil
- Partially Hydric Soil
- Non-Hydric Soil

DNR 24k Hydrography
- Perennial Stream*
- Intermittent Stream
- Waterbody*

*No features within data frame

0 100 200 Feet
(At original document size of 8.5x11)
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Stantec

Project Location
T8N, R11E, S35,
T. of Sun Prairie, Dane Co., WI

Prepared by JM on 2021-08-02
TR by RA on 2021-08-05
IR by KR on 2021-08-23

Client/Project 193708475
Todd Justmann
Justmann Wetland Determination

Figure No.
2

Title
NRCS Soil Survey Data
Hydric Ratings

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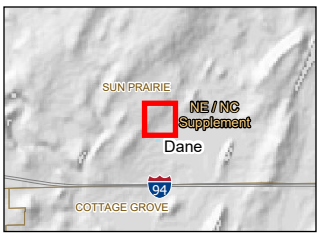

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1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, WDNR, WisDOT, NRCS
3. Background: 2018 NAIP

Legend
- Project Boundary

NRCS Soil Survey Data
Drainage Classification
- Very Poorly Drained
- Poorly Drained
- Somewhat Poorly Drained

DNR 24k Hydrography
- Perennial Stream*
- Intermittent Stream
- Waterbody*

*No features within data frame

0 100 200 Feet
(At original document size of 8.5x11)
1:2,400

N

Stantec

Project Location
T8N, R11E, S35,
T. of Sun Prairie, Dane Co., WI

Prepared by JM on 2021-08-02
TR by RA on 2021-08-05
IR by KR on 2021-08-23

Client/Project
Todd Justmann
Justmann Wetland Determination

193708475

Figure No.
3

Title
NRCS Soil Survey Data
Drainage Classification

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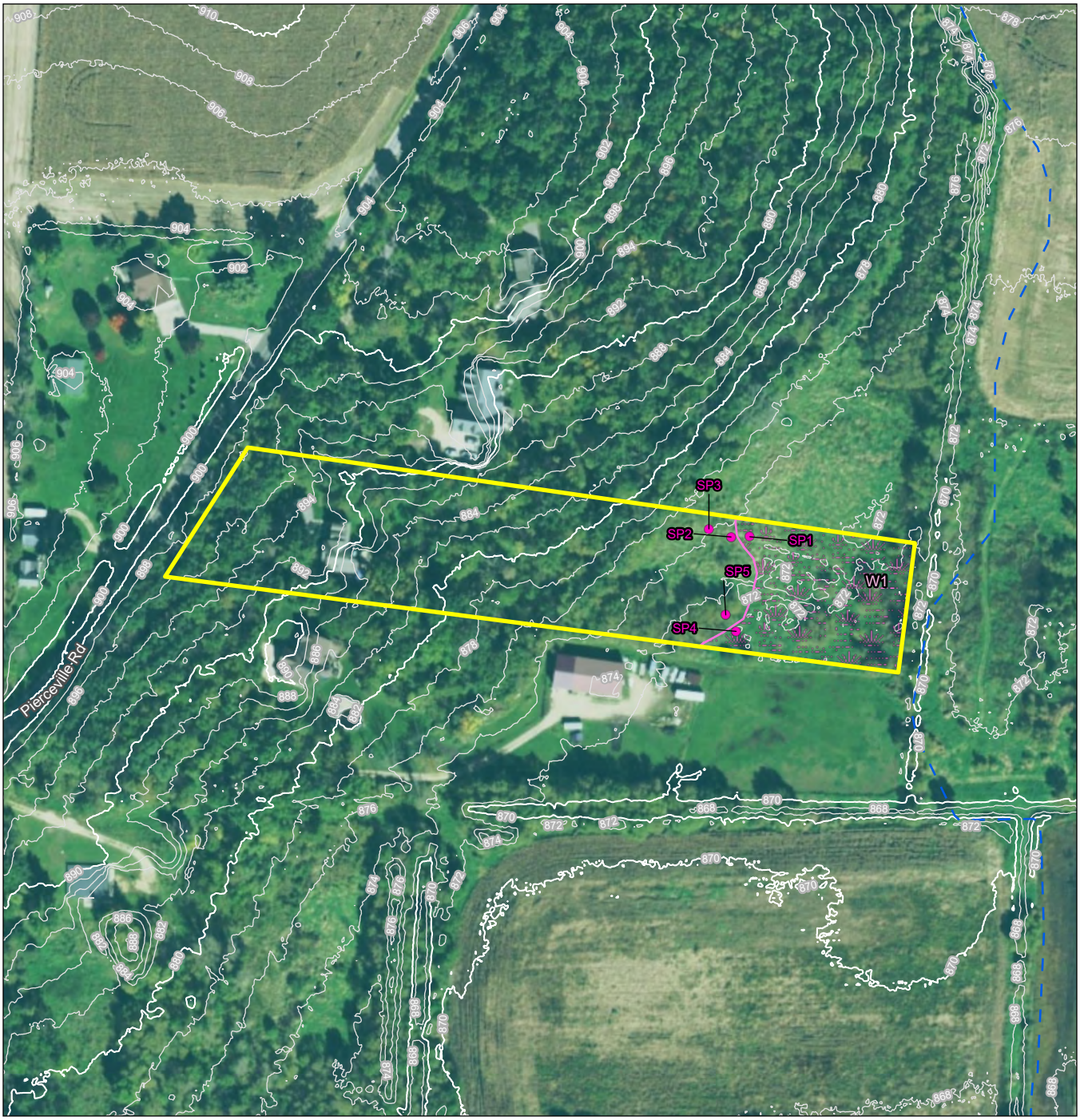

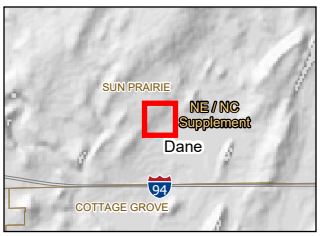

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1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, WDNR, WisDOT
3. Background: 2018 NAIP

Legend
- Project Boundary
- Sample Point
- Field Delineated Wetland
- 2ft Elevation Contour

DNR 24k Hydrography
- Perennial Stream*
- Intermittent Stream
- Waterbody*

*No features within data frame

0 100 200 Feet

(At original document size of 8.5x11)
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Stantec

Project Location
T8N, R11E, S35,
T. of Sun Prairie, Dane Co., WI

Prepared by JM on 2021-08-04
TR by RA on 2021-08-05
IR by KR on 2021-08-23

Client/Project
Todd Justmann
Justmann Wetland Determination

193708475

Figure No.
5

Title
Field Collected Data

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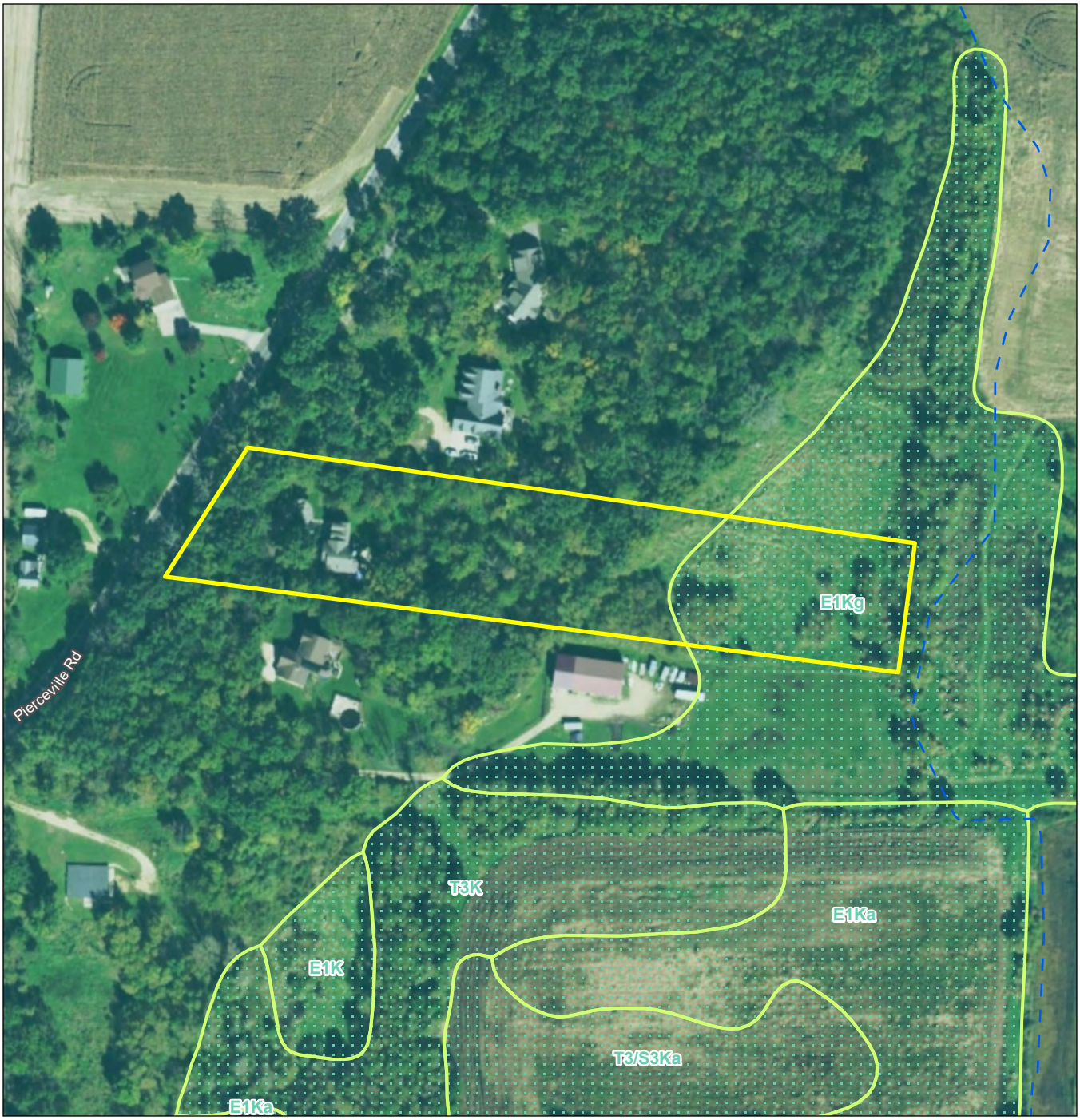

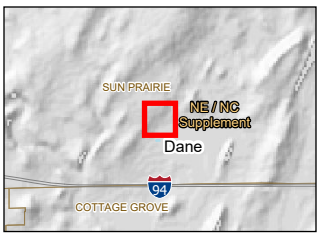

Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, WDNR, WisDOT
3. Background: 2018 NAIP

Legend
- Project Boundary

WWI Wetland Class Points
- Wetland Too Small to Delineate*

WWI Wetland Class Areas
- Wetland

DNR 24k Hydrography
- Perennial Stream*
- Intermittent Stream
- Waterbody*

*No features within data frame

0 100 200 Feet
(At original document size of 8.5x11)
1:2,400

N

Stantec

Project Location
T8N, R11E, S35,
T. of Sun Prairie, Dane Co., WI

Prepared by JM on 2021-08-02
TR by RA on 2021-08-05
IR by KR on 2021-08-23

Client/Project 193708475
Todd Justmann
Justmann Wetland Determination

Figure No.
4

Title
Wisconsin Wetland Inventory

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Appendix C WETS ANALYSIS

WETS Analysis Worksheet

Project Name: 4908 Pierceville Road
Project Number: 193708475
Period of interest: May - July
Station: Dane County Regional Airport
County: Dane County, WI

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	July	3.14	4.36	5.15
2nd month prior:	June	3.26	5.24	6.33
3rd month prior:	May	2.75	4.08	4.88
		Sum =	**13.68**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.58	Dry	1	3	3
4.60	Normal	2	2	4
2.20	Dry	1	1	1
Sum = **8.38**			Sum*** =	**8**

***Normal** precipitation with 30% to 70% probability of occurrence

Determination:

	Wet
X	Dry
	Normal

****Condition value:**

Dry = 1
Normal = 2
Wet = 3

*****If sum is:**

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

NOTE: 2.15 inches of precipitation received August 5-11, 2021, with 0.97in 8/7, 0.02in 8/8, 0.80in 8/9, and 0.35in 8/10.

Precipitation data source: Agricultural Applied Climate Information System: http://agacis.rcc-acis.org/

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

Appendix D WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 4908 Pierceville Road City/County: T. of Sun Prairie / Dane County Sampling Date: 8/12/2021

Applicant/Owner: Todd Justmann State: WI Sampling Point: SP1

Investigator(s): K. Remus Section, Township, Range: S35, T8N, R11E

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

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum: NAD83

Soil Map Unit Name: Houghton muck NWI classification: WWI: E1Kg

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W1

Remarks: (Explain alternative procedures here or in a separate report.)
Based on a WETS anlysis of May-July 2021 precipitation records, climatic conditions were drier than the 30-year normal range. In August, 2.15in of precipitation was received in the week (Aug 5-11) leading up to the field investigation. Sample point located in fallow/old field irregularly mowed by landowner.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
Soil profile moist throughout, but no water table or saturation observed likely due to drier than normal conditions. Sample point approx 1ft below SP2.

VEGETATION – Use scientific names of plants.

Sampling Point: SP1

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5ft radius)			
1. *Phalaris arundinacea*	80	Yes	FACW
2. *Cyperus esculentus*	10	No	FACW
3. *Cerastium fontanum*	10	No	FACU
4. *Apocynum cannabinum*	7	No	FAC
5. *Ambrosia artemisiifolia*	5	No	FACU
6. *Solidago gigantea*	5	No	FACW
7. *Abutilon theophrasti*	3	No	FACU
8.			
9.			
10.			
11.			
12.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: 30ft radius)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	95	x 2 =	190
FAC species	7	x 3 =	21
FACU species	18	x 4 =	72
UPL species	0	x 5 =	0
Column Totals:	120 (A)		283 (B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Noted shift in vegetation coverage between upland and wetland.

SOIL

Sampling Point: SP1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100						muck
18-25	10YR 5/1	93	10GY 5/1	5	D	M		silty clay
			2.5Y 5/6	2	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

NRCS Field Indicators of Hydric Soils, Version 8.2, 2018 reviewed to confirm presence/absenc of hydric soil indicators.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 4908 Pierceville Road City/County: T. of Sun Prairie / Dane County Sampling Date: 8/12/2021

Applicant/Owner: Todd Justmann State: WI Sampling Point: SP2

Investigator(s): K. Remus Section, Township, Range: S35, T8N, R11E

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

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum: NAD83

Soil Map Unit Name: Houghton muck NWI classification: WWI: E1Kg

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Based on a WETS anlysis of May-July 2021 precipitation records, climatic conditions were drier than the 30-year normal range. In August, 2.15in of precipitation was received in the week (Aug 5-11) leading up to the field investigation. Sample point located in fallow/old field irregularly mowed by landowner. Hydric soil indicators observed, but overall lack of hydrophytic vegetation and wetland hydrology indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
Sample point located upslope, approx 1ft higher than SP1.

VEGETATION – Use scientific names of plants.

Sampling Point: SP2

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5ft radius)			
1. *Phalaris arundinacea*	55	Yes	FACW
2. *Trifolium pratense*	30	Yes	FACU
3. *Apocynum cannabinum*	10	No	FAC
4. *Plantago major*	10	No	FACU
5. *Cyperus esculentus*	5	No	FACW
6. *Daucus carota*	5	No	UPL
7. *Setaria faberi*	5	No	FACU
8. *Ambrosia trifida*	3	No	FAC
9. *Erigeron strigosus*	2	No	FACU
10. *Lotus corniculatus*	2	No	FACU
11.			
12.			
	127 =Total Cover		
Woody Vine Stratum (Plot size: 30ft radius)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	13	x 3 =	39
FACU species	49	x 4 =	196
UPL species	5	x 5 =	25
Column Totals:	127 (A)		380 (B)

Prevalence Index = B/A = 2.99

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Noted shift in vegetation between wetland and upland - much more red clover, Queen Anne's-lace in upland areas.

SOIL

Sampling Point: SP2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100						clay loam
6-12	10YR 2/1	100						silty clay loam
12-21	10YR 5/1	85	10GY 5/1	10	D	M		silty clay
			2.5Y 5/6	5	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

NRCS Field Indicators of Hydric Soils, Version 8.2, 2018 reviewed to confirm presence/absence of hydric soil indicators.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 4908 Pierceville Road City/County: T. of Sun Prairie / Dane County Sampling Date: 8/12/2021

Applicant/Owner: Todd Justmann State: WI Sampling Point: SP3

Investigator(s): K. Remus Section, Township, Range: S35, T8N, R11E

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

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum: NAD83

Soil Map Unit Name: Sable silty clay loam NWI classification: WWI: E1Kg

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Based on a WETS anlysis of May-July 2021 precipitation records, climatic conditions were drier than the 30-year normal range. In August, 2.15in of precipitation was received in the week (Aug 5-11) leading up to the field investigation. Sample point located in fallow/old field irregularly mowed by landowner. Hydric soil indicators observed, but overall lack of hydrophytic vegetation and wetland hydrology indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
Sample point located upslope, approx 2ft higher than SP1.

VEGETATION – Use scientific names of plants. Sampling Point: SP3

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5ft radius)			
1. *Trifolium pratense*	35	Yes	FACU
2. *Phalaris arundinacea*	20	Yes	FACW
3. *Plantago major*	20	Yes	FACU
4. *Daucus carota*	10	No	UPL
5. *Medicago lupulina*	10	No	FACU
6. *Setaria faberi*	10	No	FACU
7. *Ambrosia trifida*	5	No	FAC
8. *Apocynum cannabinum*	5	No	FAC
9. *Cirsium discolor*	5	No	UPL
10. *Lotus corniculatus*	5	No	FACU
11.			
12.			
	125	=Total Cover	
Woody Vine Stratum (Plot size: 30ft radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	10	x 3 =	30
FACU species	80	x 4 =	320
UPL species	15	x 5 =	75
Column Totals:	125 (A)		465 (B)

Prevalence Index = B/A = 3.72

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Noted shift in vegetation between wetland and upland - much more red clover, Queen Anne's-lace in upland areas.

SOIL

Sampling Point: SP3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	60						clay loam
	10YR 2/2	40						clay loam
5-12	10YR 3/1	95	10YR 3/4	5	C	M		silty clay loam
12-20	10YR 4/1	95	10YR 4/4	5	C	M		silty clay

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

NRCS Field Indicators of Hydric Soils, Version 8.2, 2018 reviewed to confirm presence/absence of hydric soil indicators.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 4908 Pierceville Road City/County: T. of Sun Prairie / Dane County Sampling Date: 8/12/2021

Applicant/Owner: Todd Justmann State: WI Sampling Point: SP4

Investigator(s): K. Remus Section, Township, Range: S35, T8N, R11E

Landform (hillside, terrace, etc.): Terrace / Plain Local relief (concave, convex, none): none Slope %: 1

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum: NAD83

Soil Map Unit Name: Houghton muck NWI classification: WWI: E1Kg

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ___	**within a Wetland?** **Yes** X **No** ___
Wetland Hydrology Present?	Yes X	No ___	If yes, optional Wetland Site ID: W1

Remarks: (Explain alternative procedures here or in a separate report.)
Based on a WETS anlysis of May-July 2021 precipitation records, climatic conditions were drier than the 30-year normal range. In August, 2.15in of precipitation was received in the week (Aug 5-11) leading up to the field investigation. Sample point located in fallow/old field irregularly mowed by landowner.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 11
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 11

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

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

Remarks:
Soil profile moist throughout, water table rose in soil pit left open.

VEGETATION – Use scientific names of plants.

Sampling Point: SP4

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5ft radius)			
1. *Phalaris arundinacea*	95	Yes	FACW
2. *Persicaria maculosa*	10	No	FAC
3. *Rumex crispus*	7	No	FAC
4. *Ambrosia trifida*	3	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115 =Total Cover		
Woody Vine Stratum (Plot size: 30ft radius)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	95	x 2 =	190
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		250 (B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point: SP4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-29	10YR 2/1	100						muck

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

NRCS Field Indicators of Hydric Soils, Version 8.2, 2018 reviewed to confirm presence/absence of hydric soil indicators.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 4908 Pierceville Road City/County: T. of Sun Prairie / Dane County Sampling Date: 8/12/2021

Applicant/Owner: Todd Justmann State: WI Sampling Point: SP5

Investigator(s): K. Remus Section, Township, Range: S35, T8N, R11E

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

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum: NAD83

Soil Map Unit Name: Houghton muck NWI classification: WWI: E1Kg

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Based on a WETS anlysis of May-July 2021 precipitation records, climatic conditions were drier than the 30-year normal range. In August, 2.15in of precipitation was received in the week (Aug 5-11) leading up to the field investigation. Sample point located in fallow/old field irregularly mowed by landowner at edge of fill area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP5

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5ft radius)			
1. *Daucus carota*	20	Yes	UPL
2. *Echinochloa crus-galli*	20	Yes	FAC
3. *Setaria faberi*	20	Yes	FACU
4. *Trifolium pratense*	15	No	FACU
5. *Ambrosia trifida*	10	No	FAC
6. *Lactuca serriola*	10	No	FACU
7. *Phalaris arundinacea*	10	No	FACW
8. *Persicaria maculosa*	5	No	FAC
9. *Rumex crispus*	5	No	FAC
10. *Abutilon theophrasti*	2	No	FACU
11.			
12.			
	117 =Total Cover		
Woody Vine Stratum (Plot size: 30ft radius)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	40	x 3 =	120
FACU species	47	x 4 =	188
UPL species	20	x 5 =	100
Column Totals:	117 (A)		428 (B)

Prevalence Index = B/A = 3.66

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point: SP5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	90						clay loam
	10YR 5/4	10						sandy clay loam
5-20	10YR 3/1	80						silty clay loam
	10YR 5/3	10						clay loam
		10						fine to coarse gravel
20-26	10YR 2/1	100						silt loam

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

NRCS Field Indicators of Hydric Soils, Version 8.2, 2018 reviewed to confirm presence/absenc of hydric soil indicators.

Entire profile unconsilidated/crumbly. Mixed fill materials in first and second horizon.

Appendix E SITE PHOTOGRAPHS

Photo 1. Wetland sample point SP1; view east

Photo 2. Wetland sample point SP1; view west

Photo 3. Upland sample point SP2; view east

Photo 4. Upland sample point SP2; view west

Photo 5. Upland sample point SP3; view east

Photo 6. Upland sample point SP3; view west

Photo 7. Wetland sample point SP4; view east

Photo 8. Wetland sample point SP4; view west

Photo 9. Upland sample point SP5; view east

Photo 10. Upland sample point SP5; view west

Photo 11. View east from near east edge of gravel pad towards wetland W1

Photo 12. View north from near east edge of gravel pad

Photo 13. View south from near east edge of gravel pad

Photo 14. View west from near east edge of gravel pad; access path through woodland visible in background.

Photo 15. View east from access path entrance at east edge of woodland

Photo 16. View northeast from access path entrance at east edge of woodland

Photo 17. View southeast from access path entrance at east edge of woodland

Photo 18. View west at access path through woodland