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Madison Springs

Professionally Assured Wetland Delineation Report

Project Number: DAN25-020-01
Property Address: County Highway V & Patton Road, Town of Vienna, Dane County, Wisconsin
Parcel IDs: 090916495100 and 090921180003

October 17, 2025

Report Request by

EXCEL ENGINEERING
Always a better plan

100 Camelot Drive
Fond du Lac, Wisconsin 54935

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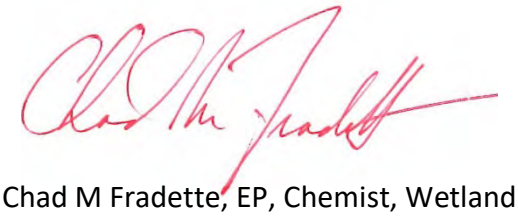
Field Work Certification:



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Appendices

Introduction

Evergreen was retained by Excel Engineering to perform a professionally assured wetland delineation. The property is located on County Highway V & Patton Road in the Town of Vienna, Wisconsin. The study area is approximately 72.93 acres in size and is in part of the Northeast ¼ of the Northeast ¼ of Section 21 and part of the Southeast ¼ of the Southeast ¼ of Section 16, Township 9 North, Range 9 East, Town of Vienna, Dane County, Wisconsin. Site Maps can be found in Appendix A.

The wetland delineation was conducted on September 7th and October 17, 2025, by Chad Fradette, a Wisconsin Department of Natural Resources (WDNR) Professionally Assured Wetland Delineator with assistance from Shyann Banker and Ashley Poehls. The delineation was conducted for developmental planning purposes. The study area consists of cornfield, meadow, wet meadow, and cattail marsh. The study area is adjacent to the Vienna Pothole Wildlife Area.

Three wetlands were delineated during the site visit. The Wetland Data Sheets classify the wetland according to the Cowardin classification system[1].

Wetland ID	Wetland Description[2]	Cowardin Classification[3]	*Surface Water Connections	*NR151 Protective Area	Acreage On-site
Wetland 1	Ruderal Wet Meadow and Ruderal Marsh	PEM1J	Isolated	Less susceptible, 20 feet	164,819 sf 3.784 acres
Wetland 2	Ruderal Wet Meadow and Emergent Marsh	PEM1BJ	Isolated	Less susceptible, 30 feet and moderately susceptible, 50 feet	1,073,205 sf 24.637 acres
Wetland 3	Ruderal Wet Meadow	PEM1B	Isolated	Less susceptible, 10 feet	1,095 sf 0.025 acres
**These are based on professional opinion. Local zoning ordinances may have additional restrictions. US Army Corps of Engineers has authority for determining federal jurisdiction of wetlands and waterways.*					**28.446 ac**

The WDNR Wisconsin Wetland Inventory (WWI) Map was reviewed and indicates the presence of emergent wetlands in the middle and southwest portions of the study area. The WWI wetland indicator soils layer was also reviewed and indicates the presence of indicator soils throughout the south half of the

[1] Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

[2] WI Department of Natural Resources, *Natural Heritage Conservation Key to Wetland Natural Communities,* Version 1.3, 4/8/2022

[3] Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

study area except for the area of higher elevation in the southeast corner. The study area is mapped as having Predominantly Hydric, Predominantly Non-Hydric, and Non-Hydric soils. Indicator soils are soils which are commonly found in wetlands or have inclusions of soils that are commonly found in wetlands. The WDNR Surface Water Data Viewer (SWDV) was also reviewed and indicates the absence of waterways within or immediately adjacent to the study area.

An antecedent precipitation evaluation was conducted for three months prior to each of the site visits. It was determined climatic conditions were normal at the time of the September site visit during the wet season and drier than normal at the time of the October site visit during the wet season. The antecedent precipitation evaluation, WETS data and Palmer Drought Index reports for the area at the time of the site visits are included in Appendix F.

The areas identified as wetland were identified based on transitions from wetland to upland vegetation, hydrology indicators and hydric soil indicators, or lack thereof, in wetland areas versus upland areas, topographical position and best professional judgment. See Appendix A for the Wetland Determination Map. Wetland data sheets are included in Appendix G.

Personnel

Mr. Fradette is an Environmental Professional, Analytical Chemist, WDNR Professionally Assured Wetland Delineator and has over twenty years of experience working on public and private infrastructure, community development, and industrial projects throughout the entire Midwest and Northeast, including Wisconsin. His expertise is in completing wetland delineations, reports, permit applications, exemptions, compliance cases, compensatory wetland mitigation plans, endangered species assessments, and floristic habitat assessments. Mr. Fradette is professionally trained and experienced in the practice of wetland delineation.

Mrs. Shyann Banker, Environmental Scientist and WDNR Professionally Assured Wetland Delineator and has nine years of experience conducting wetland delineations for utility, municipal, residential, and industrial projects in Wisconsin. Her expertise is in completing wetland delineations, reports, and exemption applications.

Ms. Ashley Poehls, Biologist, has two years of professional experience in working on utility, municipal, residential, and industrial projects in Wisconsin.

Methodology

Available topographic maps, survey maps, WWI and NWI maps, County Soil Survey maps, wetland indicator and hydric soil maps and all available aerial photos were reviewed prior to visiting the property to identify potential wetland areas. These figures are included in Appendix A.

Antecedent precipitation information was evaluated through use of available local WETS data for the three months prior to the delineation to determine if conditions were within normal, wetter than normal or drier than normal at the time of the site visit. The Antecedent Precipitation Evaluation, WETS Data and the Palmer Drought Index reports are included in Appendix F.

Aerial images on cultivated or previously cultivated sites were reviewed for wet signatures following the Minnesota Board of Water and Soil Resources (BWSR) and St Paul District Corps of Engineers *Guidance for Offsite Hydrology/Wetland Determinations.*[4]

Examination of vegetation, soils, and hydrology, as outlined in the Corps of Engineers Wetlands Delineation Manual[5] and the Northcentral and Northeast Regional Supplement[6], were used to characterize, and determine wetland boundaries. The Natural Resources Conservation Service (NRCS) Field Indicators of Hydric Soils in the United States Guide[7] was also utilized to help identify hydric soils at the site and the Wetland Training Institute field guide[8]. All available information including transitions in vegetation, soils and hydrology, review of aerial photos, antecedent precipitation analysis, topographic position, along with best professional judgment was applied.

Sample transects were established in a representative wetland to upland transition zone. The transects were comprised of two or more sample points located along a line running perpendicular to the wetland edge, with at least one point in obvious wetland and one point in obvious upland. A field data form was completed for each of the upland and wetland sample points. The sample locations were also located with a GPS and are indicated on Wetland Delineation Map within Appendix A. Field data forms are included in Appendix G.

Wetland classification was performed according to Cowardin Classification. Vegetation was identified using suitable keys (Eggers[9]; Chadde[10]) and a plant's hydrophytic status was determined using the most recent Northcentral and Northeast Region – National Wetland Plant List[11]. Wetland boundaries were

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[4] USACE, MN Board of Water & Soil Resources, *Guidance for Offsite Hydrology/Wetland Determinations,* 2016

[5] USACE, Waterways Experiment Station, Wetlands Research Program Technical Report Y-87-1

[6] *Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regions,* 2012

[7] USDA, Natural Resources Conservation Service (NRCS), *Field Indicators of Hydric Soils in the United States, Guide for Identifying and delineating Hydric Soils*, Version 9.0, 2024

[8] Wetland Training Institute, Inc., *2013 Pocket Guide to Hydric Soil Field Indicators,* Wetland Training Institute, Inc., Glenwood, NM, 2013

[9] *Eggers, Steve D., and Reed, Donald M., U.S. Army Corps of Engineers, St. Paul District, Wetland Plants and Plant Communities of Minnesota & Wisconsin, Version 3.2, July 2015*

[10] Chadde, Steve W., *Wetland Plants of Wisconsin, Second Edition,* Steve Chadde, United States, 2013

[11] U.S. Army Corps of Engineers. (2023). 2022 National Wetland Plant List, version 3.6. U.S. Army Engineer Research and Development Center, Vicksburg, MS. http://wetland-plants.usace.army.mil/

determined based on the comprehensive wetland delineation method as defined in the Corps of Engineers Wetlands Delineation Manual and the Northcentral and Northeast Regional Supplement.

Mapping

The Wetland boundaries and Wetland edges were flagged with pink “Wetland Delineation” flags and/or ribbon. Boundary and sample plot locations were located with a Leica Zeno GG04 Global Positioning System (GPS) with sub-inch accuracy and are shown on the Wetland Delineation Map, located in Appendix A, Site Maps.

Results

Off Site Analysis

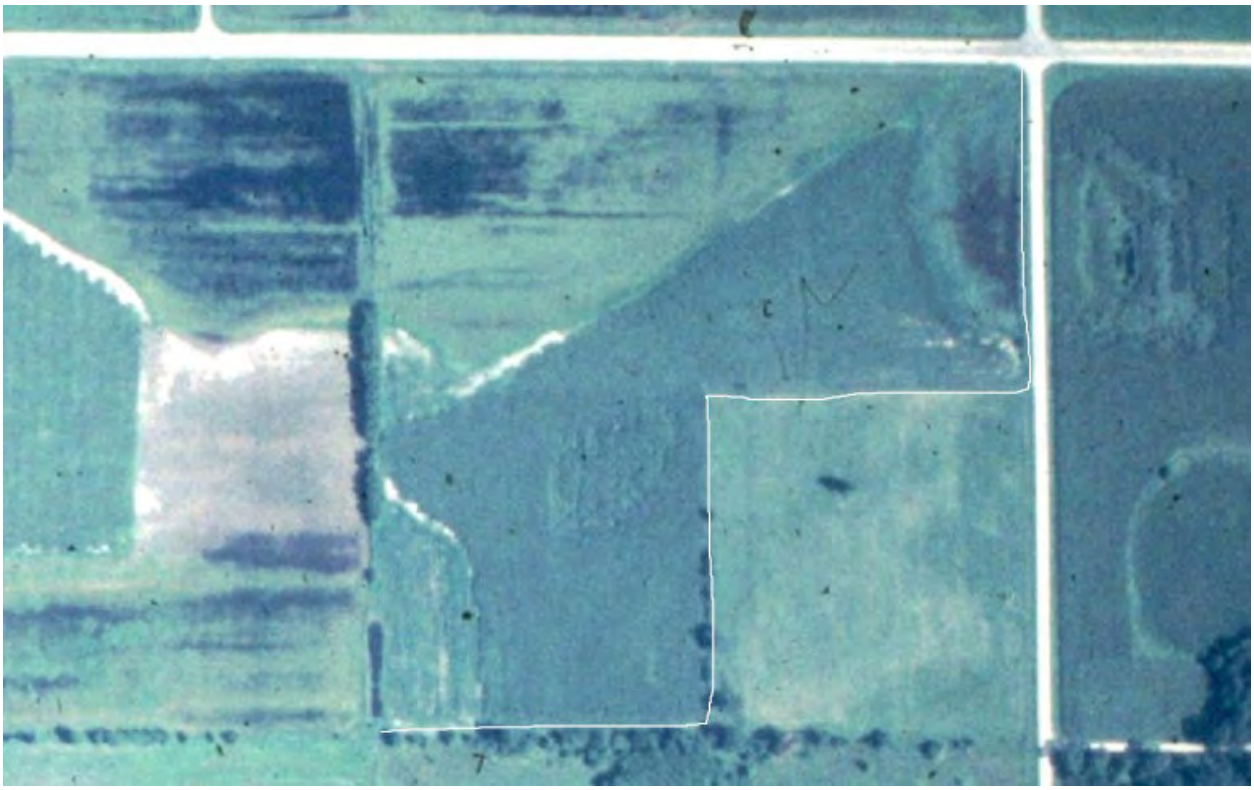
Land Use

Aerial photographs from 1937 through 2024 were reviewed. The study area was cropland with stump pasture in the south half and a road running through the middle of the site. Between 1962 and 1974 the road was re-positioned to create a straight road.

Due to historic cropping, a hydrology assessment was conducted. Two review areas were chosen based on topography, soil type, and visible areas of wet signature, Areas A and B. All available aerial images were reviewed for the presence and absence of wet signatures. The complete review of the Historic Aerial Photographs and Hydrology Assessment is in Appendix D.

Hydrology assessment review areas and Site boundary

Based on the review, no areas were required to be reviewed in the field. Based on review in the field, test plots were installed in Areas A and B. Wetland were found within review Area B.[12] [13] [14]



View of the area in 1985, wetland signatures are visible.

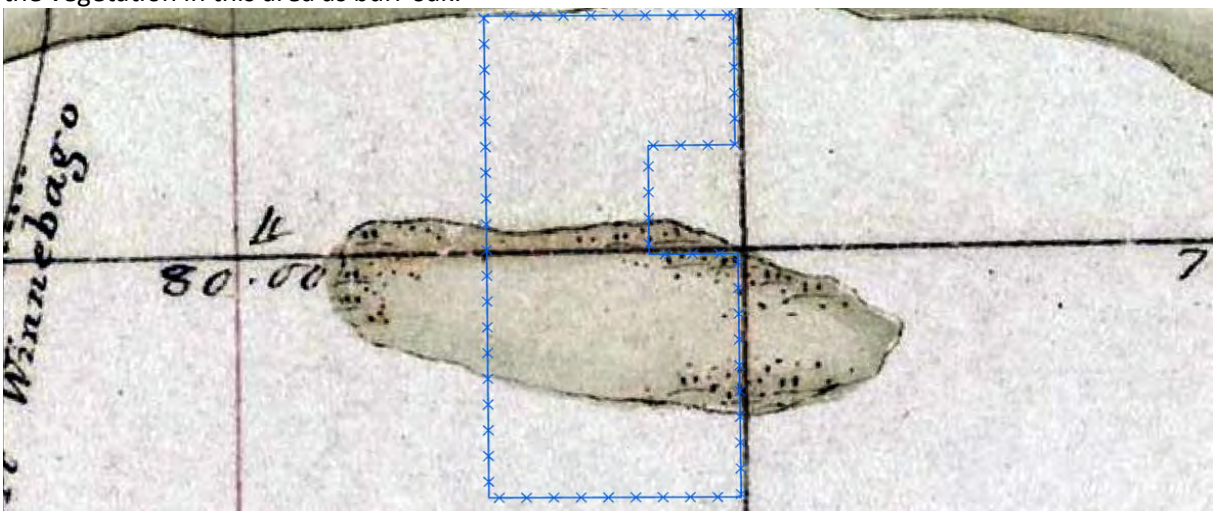
[12] Dane County, GIS, *aerial photographs*, *topography*, Dane County, WI

[13] USDA, FSA, Service Center, *FSA Slides for years 1981 through 2002*. Dane County, WI

[14] University of Wisconsin, *Wisconsin Historic Aerial Image Finder,* 2025

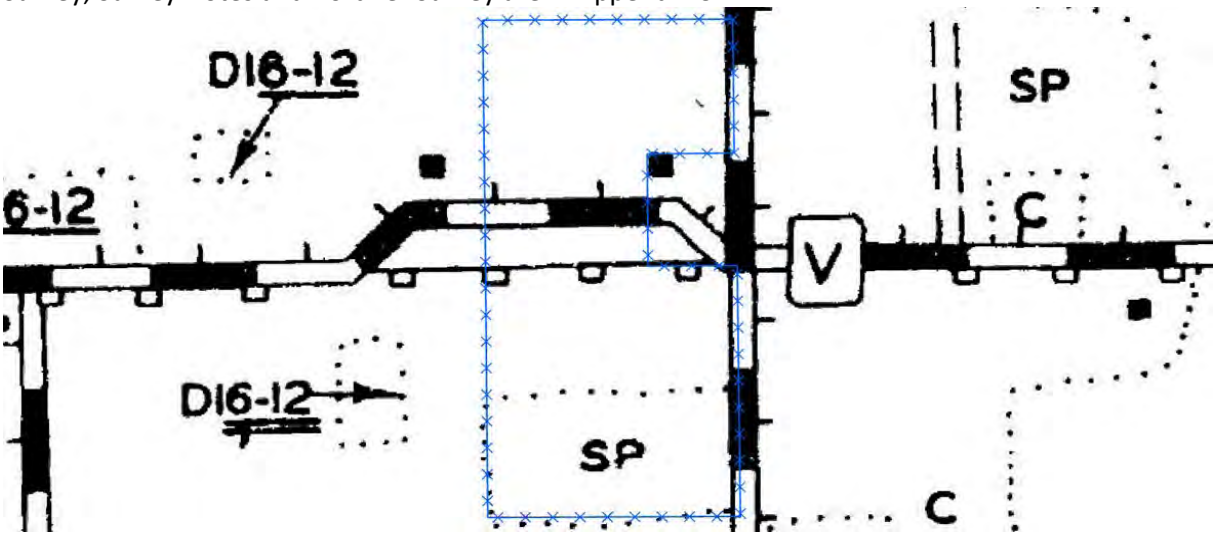
Original Land and Bordner Surveys

The Original Survey shows a swamp in the middle of the study area. The Original Survey Notes describe the vegetation in this area as burr oak.[15]



Original Survey

The Bordner Survey shows the Site as cleared cropland with stump pasture in the south[16]. The Original Survey, Survey Notes and Bordner Survey are in Appendix C.



Bordner Survey

Topography

The topography at the Site ranges from an elevation of 999 feet down to 961 feet. The topography of the Site slopes down towards the south half of the study area with an area of higher elevation in the southeast corner.[17] The Topographic Map is in Appendix A.

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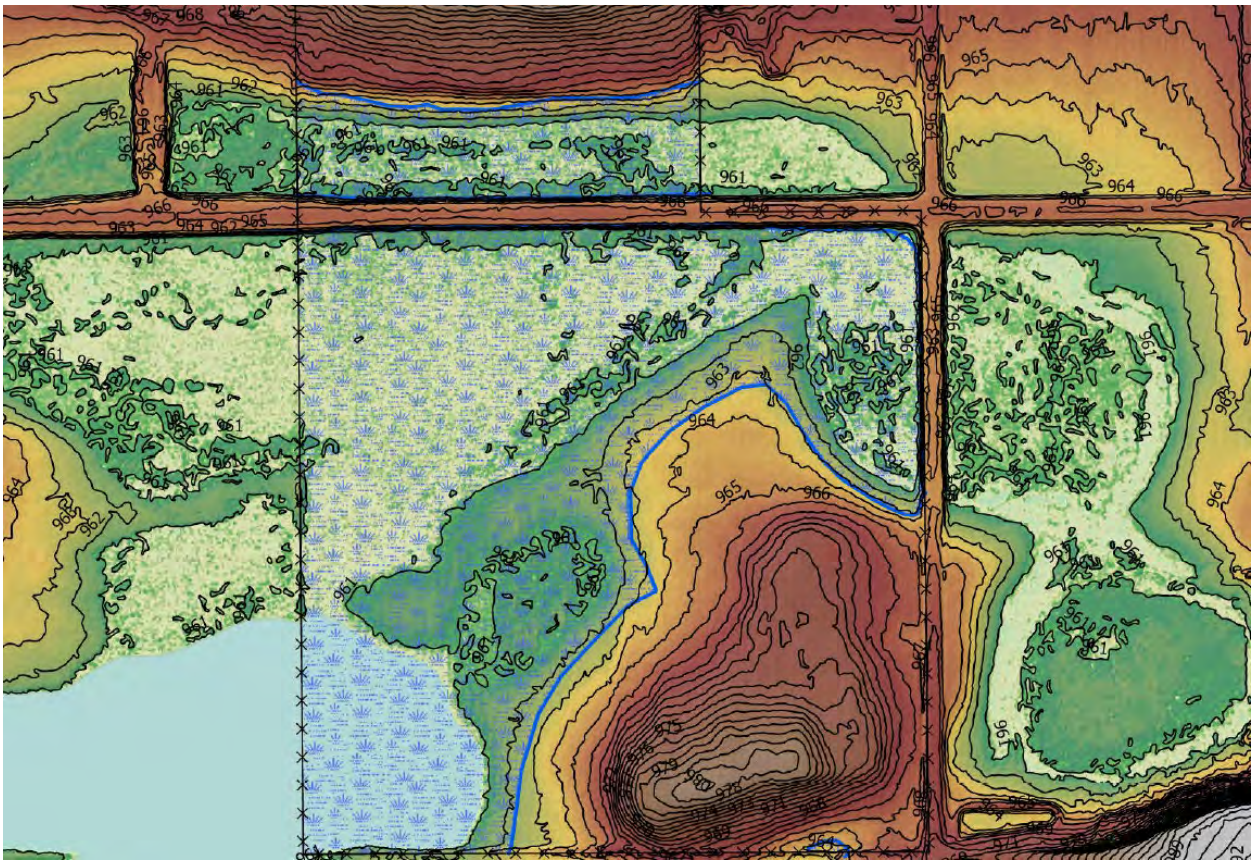
[15] Board of Commissioners of Public Lands, *Wisconsin Public Land Survey Records: Original Field Notes and Plat Maps*, Madison, Wisconsin, 2025

[16] University of Wisconsin Digital Collections Center, *Wisconsin Land Economic Inventory Maps (Bordner Survey)*, Madison, WI, 2025

[17] Dane County GIS



WDNR LiDAR Viewer Map

Precipitation

An antecedent precipitation evaluation was conducted for three months prior to each of the site visits. Precipitation data from the Arlington WETS station indicates climatic conditions were normal at the time of the September site visit and drier than normal at the time of the October site visit during the wet season. The drought index recorded mild wetness during both visits. The Palmer Drought Index also indicates conditions were wetter than normal (Moderately Moist, +2.00 to +2.99) at the September site visit and normal (Mid-Range, -1.99 to +1.99) for this location at the time of the October site visit. Based on evaluation of both sources of data, it was determined climatic conditions were normal at the September site visit and drier than normal at the time of the October site visit. The antecedent precipitation evaluation, WETS data and Palmer Drought Index reports for the area at the time of the site visits are included in Appendix F.

Wetland Mapping

The WDNR Wisconsin Wetland Inventory (WWI) Map was reviewed and indicates the presence of emergent wetlands in the middle and southwest portions of the study area.[18] The WWI wetland indicator soils layer was also reviewed and indicates the presence of indicator soils throughout the south half of the study area except for the area of higher elevation in the southeast corner. The study area is mapped as having Predominantly Hydric, Predominantly Non-Hydric, and Non-Hydric soils. Indicator soils are soils

[18] WDNR, *Surface Water Data LiDAR Viewer*, 2025

which are commonly found in wetlands or have inclusions of soils that are commonly found in wetlands. The WDNR Surface Water Data Viewer (SWDV) was also reviewed and indicates the absence of waterways within or immediately adjacent to the study area.

The NWI Map was reviewed and indicates the presence of emergent, unconsolidated bottom, and farmed wetlands in the middle and southwest portions of the study area.[19] The WWI, SWDV, and NWI Maps are in Appendix A.

Mapped Soils

The NRCS Web Soil Survey indicates the presence of the following soil types[20]:

Report—Hydric Rating by Map Unit (WI)

Hydric Rating by Map Unit (WI)–Dane County, Wisconsin				
Map Unit Symbol	Map Unit Name	Hydric Percent of Map Unit	Hydric Category	Landform Hydric Minor Components
489A	Marshan silt loam	97	WI Predominantly Hydric	Depressions
7105B	Batavia silt loam, gravelly substratum, 2 to 6 percent slopes	0	WI Nonhydric	—
7139A	Sable silty clay loam, 0 to 2 percent slopes	85	WI Predominantly Hydric	—
7199A	Plano silt loam, till substratum, 0 to 2 percent slopes	0	WI Nonhydric	—
7297B	Ringwood silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
7325C2	Dresden silt loam, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
7327B	Kegonsa silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
7425D2	Dresden loam, 12 to 20 percent slopes, eroded	0	WI Nonhydric	—
7699A	Salter sandy loam, wet variant, 0 to 3 percent slopes	5	WI Predominantly Nonhydric	Lakebeds (relict)
7748B	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	0	WI Nonhydric	—
7771A	Hayfield silt loam, 0 to 3 percent slopes	2	WI Predominantly Nonhydric	Stream terraces
7898A	Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	10	WI Predominantly Nonhydric	Drainageways

NRCS County Soil Survey Report is in Appendix E.

[19] U.S. Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, 2025

[20] USDA, NRCS, *Web Soil Survey,* 2025

Field Investigation

Three wetlands were identified and delineated within the Study Area. Wetland determination data sheets (Appendix G) were completed at 16 sample points that were representative of the wetland and upland conditions near the boundary and where potential wetlands may be present based on the desktop review and field reconnaissance. Appendix B provides photographs, typically at the sample point locations of the wetlands and adjacent uplands. The wetland boundary and sample point locations are shown on the Wetland Delineation Map within Appendix A and the wetlands are summarized in Table 1 and detailed in the following section.

Wetland 1

Wetland 1 is 3.784-acres of wet meadow and cattail marsh within a closed depression. The wetland continues beyond the study area to the east and west.

The wetland boundary was set at the point where the F6 hydric soil indicator dropped out in the adjacent corn field. This was approximately where the slope percentage dropped from 2-3% to 1-2% toeslope. The boundary was probed at regular intervals to make this determination. Flags were not left in the corn to prevent them from entering cattle feed. The boundary was continuously surveyed. All three wetland parameters were met within this wetland.

Dominant vegetation observed included reed canary grass (*Phalaris arundinacea*, FACW), common duckweed (*Lemna minor*, OBL), and hybrid cattail (*Typha x glauca*, OBL).

Redox Dark Surface (F6) and Redox Depressions (F8) hydric soil indicators were observed.

The primary wetland hydrology indicators that were observed included Surface Water (A1, High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), and Oxidized Rhizospheres on Living Roots (C3). The secondary indicators that were observed include Saturation Visible on Aerial Imagery (C9), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), and a Positive FAC-Neutral Test (D5). Surface water was present with a depth of 0-12 inches. The water table was observed at 8 inches in depth from the soil surface and the soil was saturated at 6 inches in depth from the soil surface.

View of cattail marsh and wet meadow within Wetland 1.

View of the wetland-upland boundary. Wetlands are on the left.

Wetland 2

Wetland 2 is 24.637-acres of shallow marsh and ruderal wet meadow within a depression that is occasionally cropped. The wetland continues beyond the study area to the south and west and through a culvert to the east.

The wetland boundary was set at the point where the F6 hydric soil indicator dropped out in the adjacent corn field which coincided with the edge of algal mat in some areas. The boundary was probed at regular intervals to make this determination. Flags were in the field since this area was harvested. The boundary was continuously surveyed. All three wetland parameters were met within this wetland.

Dominant vegetation observed included American water plantain (*Alisma subcordatum*, OBL), softstem bulrush (*Schoenoplectus tabernaemontani*, OBL), reed canary grass (*Phalaris arundinacea*, FACW), creeping thistle (*Cirsium arvense*, FACU), fall panic grass (*Panicum dichotomiflorum*, FACW), yellow dock (*Rumex crispus*, FAC), nodding beggarticks (*Bidens cernua*, OBL), barnyard grass (*Echinochloa crus-galli*, FAC), ditch stonecrop (*Penthorum sedoides,* OBL),

Thick Dark Surface (A12), Depleted Below Dark Surface (A11), and Redox Dark Surface (F6) hydric soil indicators were observed.

The primary wetland hydrology indicators that were observed included Algal Mat or Crust (B4) and Inundation Visible on Aerial Imagery (B7). The secondary indicators that were observed include Surface Soil Cracks (B6), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), and a Positive FAC-Neutral Test (D5).

View of ruderal wet meadow within Wetland 2.

View of the wetland-upland boundary. Wetlands are on the left.

Wetland 3

Wetland 3 is 0.025-acres of ruderal wet meadow at the edge of a cropped field. The wetland continues beyond the study area to the south.

The wetland boundary was marked by a distinct change in vegetation from reed canary grass to brome grass at the field edge. The corresponding elevation was followed around the depression. All three wetland parameters were met within this wetland.

Dominant vegetation observed was reed canary grass (*Phalaris arundinacea*, FACW).

The Thick Dark Surface (A12) hydric soil indicator was observed. A silty clay restrictive layer was observed at a depth of 22 inches from the soil surface. Layers 2 and 3 were combined to meet a depleted layer of more than 6 inches.

No primary wetland hydrology indicators were observed. The secondary indicators that were observed include Geomorphic Position (D2), Shallow Aquitard (D3), and a Positive FAC-Neutral Test (D5).

View of reed canary grass infested wet meadow within Wetland 3.

View of the wetland-upland boundary. Wetland extends into the field.

Uplands

Uplands within the study area consist of cropped field and meadow. Upland areas lacked two or more wetland indicators. Some areas of drained hydric soil were encountered.

View of cropped field adjacent to Wetland 1.

View of upland meadow.

Conclusion

This report is limited to the identification and delineation of wetlands within the Delineation Area as shown on Figure 1, Appendix A. Other regulated environmental resources that result in land use restrictions may be present (e.g. navigable waterways, floodplains, cultural resources, and threatened or endangered species).

Wetlands

Investigation of the area determined that wetlands exist as shown on the attached figures and Wetland Delineation Map.

Table 1. Summary of Wetlands Identified within the Study Area

Wetland ID	Wetland Description[21]	Cowardin Classification[22]	*Surface Water Connections	*NR151 Protective Area	Acreage On-site
Wetland 1	Ruderal Wet Meadow and Ruderal Marsh	PEM1J	Isolated	Less susceptible, 20 feet	164,819 sf 3.784 acres
Wetland 2	Ruderal Wet Meadow and Emergent Marsh	PEM1BJ	Isolated	Less susceptible, 30 feet and moderately susceptible, 50 feet	1,073,205 sf 24.637 acres
Wetland 3	Ruderal Wet Meadow	PEM1B	Isolated	Less susceptible, 10 feet	1,095 sf 0.025 acres
**These are based on professional opinion. Local zoning ordinances may have additional restrictions. US Army Corps of Engineers has authority for determining federal jurisdiction of wetlands and waterways.*					**28.446 ac**

The wetlands identified for this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers, state regulation under the jurisdiction of Wisconsin DNR, and local jurisdiction under Dane County, and the Town of Vienna.

[21] WI Department of Natural Resources, *Natural Heritage Conservation Key to Wetland Natural Communities,* Version 1.3, 4/8/2022

[22] Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Protective Areas

WI Admin. Code[23] requires that impervious surfaces shall be kept out of the "protective area" to the maximum extent practicable. Protective area is an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface.

Protective area does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.

a. For outstanding resource waters and exceptional resource waters, and for wetlands in areas of special natural resource interest as specified in s. NR 103.04, 75 feet.

b. For perennial and intermittent streams identified on a United States geological survey 7.5-minute series topographic map, or a county soil survey map, whichever is more current, 50 feet.

c. For lakes, 50 feet.

d. For highly susceptible wetlands, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded basins.

e. For less susceptible wetlands, 10% of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass.

Protective Areas do not apply to the following:

1. Redevelopment post-construction sites.
2. In-fill development areas less than 5 acres.
3. Structures that cross or access surface waters such as boat landings, bridges and culverts.
4. Structures constructed in accordance with s. 59.692 (1v), Stats.
5. Post-construction sites from which runoff does not enter the surface water, except to the extent that vegetative ground cover is necessary to maintain bank stability.
6. Wetlands that have been completely filled in accordance with all applicable state and federal regulations.

Authority to apply wetland and waterway protective areas under NR 151 lies with the WDNR. Some local zoning authorities and regional planning organizations may have adopted protective areas as setbacks as part of their zoning codes or may have additional land use restrictions within or adjacent to wetlands.

Concurrence and Certification

If wetlands are proposed to be impacted a Section 404 Letter of Permission Authorization will need to be obtained from USACE and according to Section 281.36, Wisconsin Statutes and NR 299 and NR 103, Wisconsin Administrative Code a permit from the WDNR would be necessary.

For wetlands to be confirmed as exempt from state regulatory authority an exemption determination application must be submitted to the DNR Wetland ID Program whose staff makes the final decision.

Chad M Fradette is a WDNR Professionally Assured Wetland Delineator and WDNR concurrence is granted for five years unless site conditions are significantly altered.

[23] Wisconsin Administrative Code, NR 151.245

Plant Identification References

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State of Wisconsin
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1027 W. Saint Paul Avenue
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Tony Evers, Governor
Karen Hyun, Ph.D., Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

April 1, 2025

Chad M Fradette, EP
Evergreen Consultants LLC
1138 State Highway 32
P.O. Box 680
Pulaski, WI 54162

Subject: 2025 Assured Wetland Delineator Confirmation

Dear Chad Fradette:

This letter provides Wisconsin Department of Natural Resources (WDNR) confirmation for the wetland delineations you conduct during the 2025 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.

To comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at calvin.lawrence@wisconsin.gov).

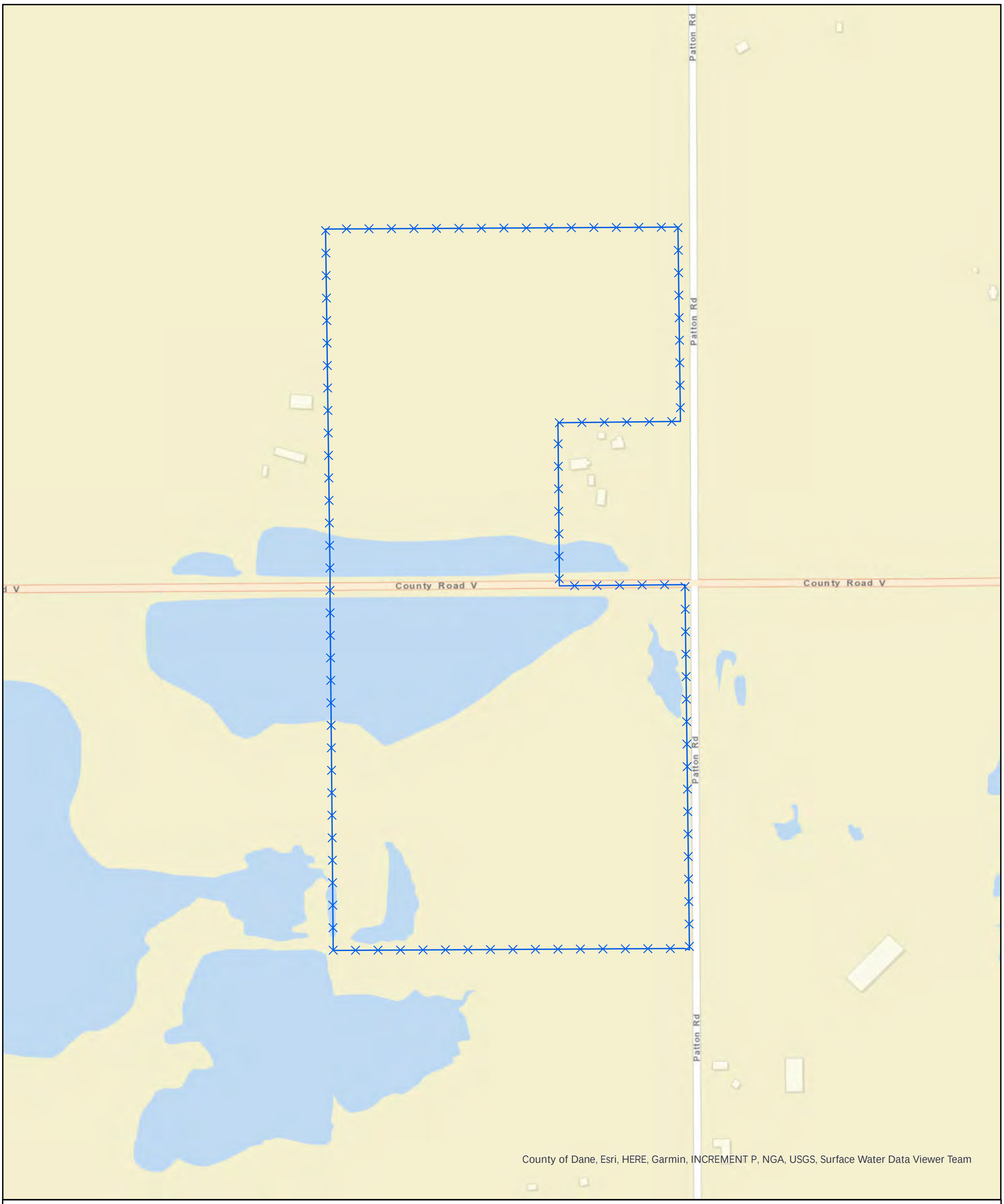
If you or any client has a question regarding your status in the Wetland Delineation Professional Assurance Program, contact me by email at kara.brooks@wisconsin.gov or phone at 414-308-6780. Thank you for all your hard work and best wishes for the upcoming field season.

Sincerely,

Kara Brooks
Wetland Identification Coordinator
Bureau of Watershed Management

Appendix A:

Figures and Site Maps



Madison Springs
Site Location Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

Site Boundary

N
W E
S

Project: DAN25-020-01

0 175 350 700
Feet

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com

Legend

- Site Boundary
- Sample Point
- Picture Location
- Wetland Line
- Wetland
- Culvert

Madison Springs
Wetland Delineation Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

N
W E
S

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist
WDNR Professionally Assured Wetland Delineator

Project: DAN25-020-01

0 125 250 500
Feet

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com

Legend

- Site Boundary
- Picture Location
- WDNR Protective Area
- Wetland Line
- Wetland
- Parcels
- Culvert

Madison Springs
Wetland Delineation Map with WDNR Protective Areas
County Highway V & Patton Road
Town of Vienna
Dane County, WI

N
W E
S

Project: DAN25-020-01

0 125 250 500 Feet

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist
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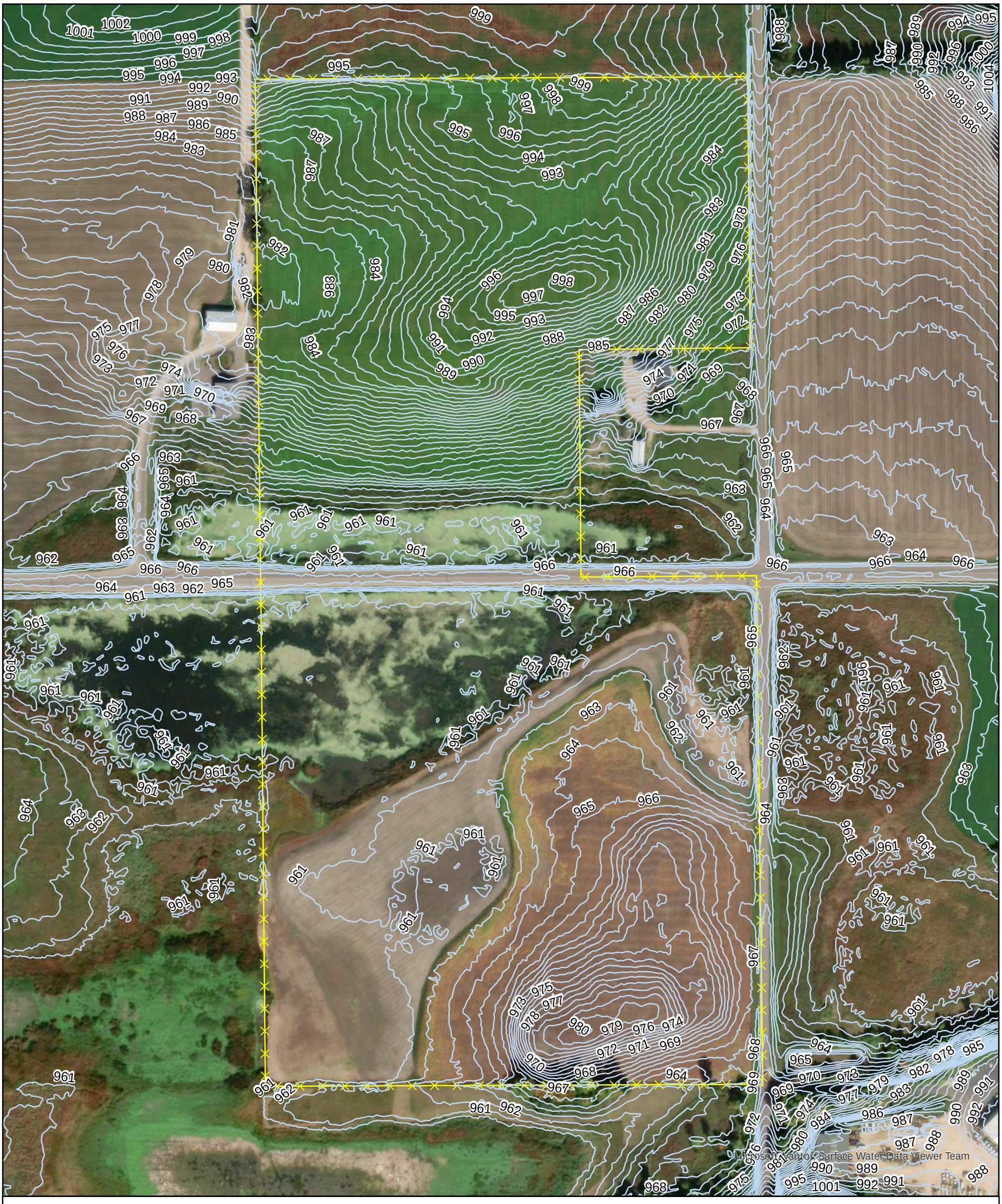

Madison Springs
Topographic Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

N
W E
S

Legend

- Site Boundary
- Contours

Project: DAN25-020-01

0 125 250 500
Feet

evergreen consultants LLC
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Madison Springs
WDNR LiDAR Viewer Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

- Site Boundary
- Wetland Line
- Wetland
- Contours

N
W E
S

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

Project: DAN25-020-01

0 125 250 500
Feet

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Phone: 920.615.0019 • Website: www.evergreenwis.com

Madison Springs
Wisconsin Wetland Inventory Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

N
W E
S

Legend

- Site Boundary
- Wisconsin Wetland Inventory
- Wetland Points
- USDA Wetspots
- Maximum Extent Wetland Indicators

Project: DAN25-020-01

0 125 250 500
Feet

evergreen consultants LLC
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Phone: 920.615.0019 • Website: www.evergreenwis.com

Madison Springs
National Wetland Inventory Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

- Site Boundary
- NWI Wetlands

N
W E
S

Project: DAN25-020-01

0 125 250 500
Feet

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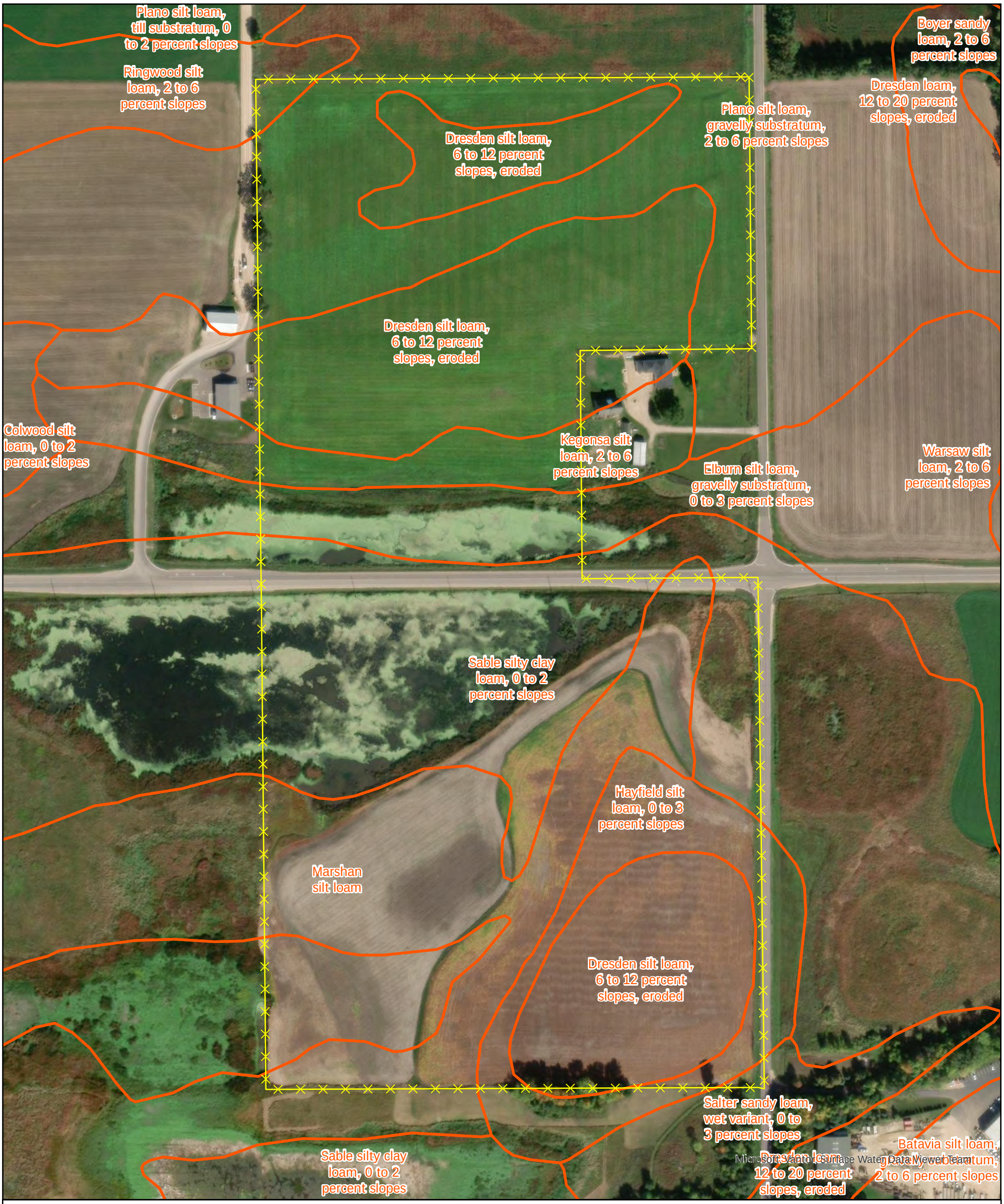

Madison Springs
NRCS Soil Survey Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

- Site Boundary
- USA Soils Map Units

N
W E
S

Project: DAN25-020-01

0 125 250 500
Feet

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Phone: 920.615.0019 • Website: www.evergreenwis.com

Madison Springs
NRCS Soil Hydric Ratings Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

N
W E
S

Legend

Site Boundary

NRCS Soil Hydric Ratings

- Hydric
- Predominantly Hydric
- Partially Hydric
- Predominantly Non-Hydric

Project: DAN25-020-01

0 125 250 500
Feet

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Phone: 920.615.0019 • Website: www.evergreenwis.com

Madison Springs
USGS Topographic Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

Site Boundary

N
W E
S

Project: DAN25-020-01

0 300 600 1,200
Feet

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com

Appendix B:

Site Pictures

Standing at the wetland boundary of Wetland 1 facing west on the boundary.

Standing near T1A.

Standing near T2A.

Standing near T2B facing east within Wetland 1.

Standing near T3A facing west.

Standing near T3A facing south towards Wetland 1.

Standing near T3B facing south within Wetland 1.

Standing near T4A facing west towards Wetland 3.

Facing southwest towards Wetland 3.

Standing near T4B within Wetland 3.

Standing near T5A within Wetland 2.

Standing near T5B facing north within Wetland 2.

Standing near T5C facing east.

Standing near T6A facing east within Wetland 2.

Standing near T6B.

Standing near T7A facing north within Wetland 2.

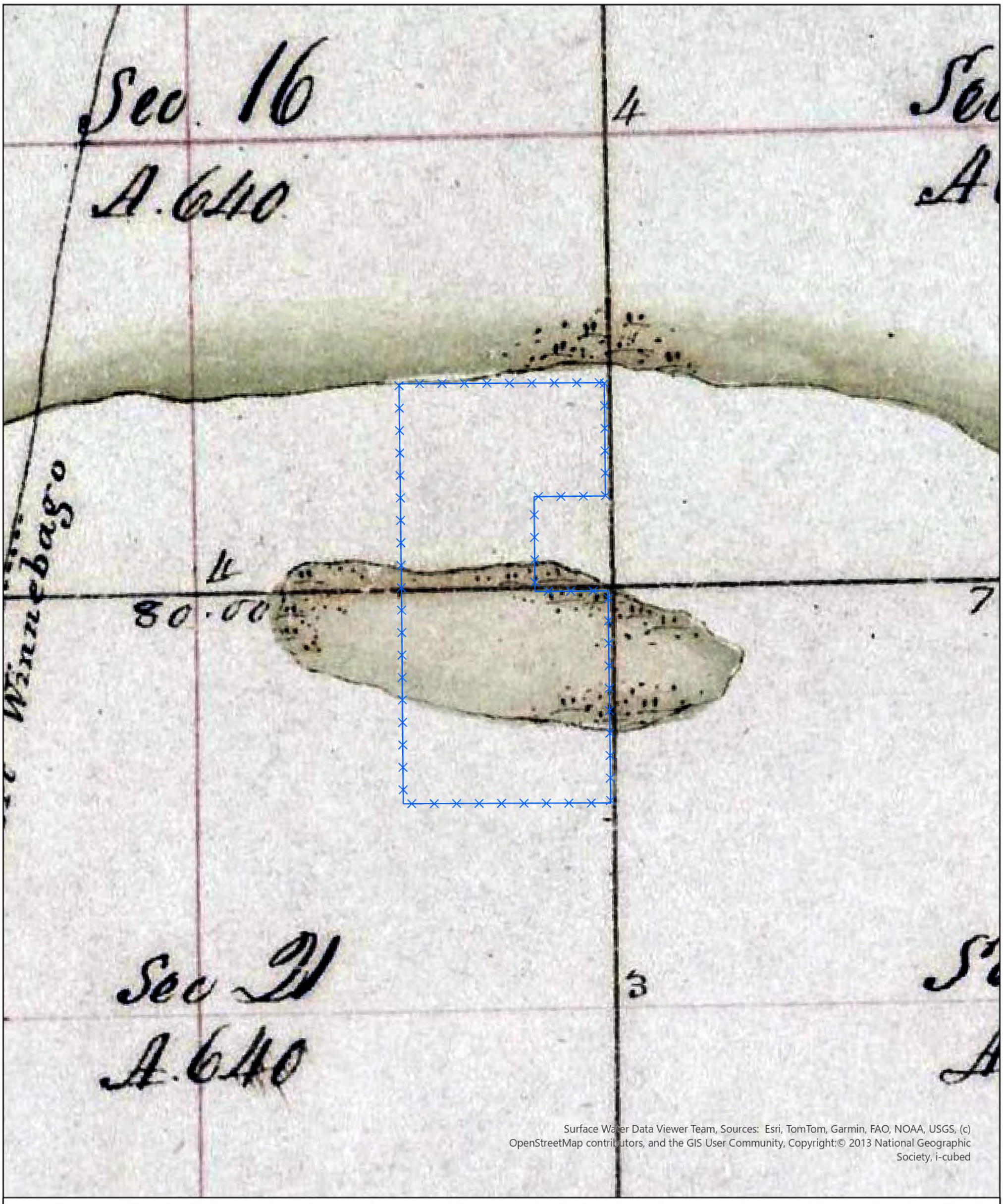
Standing near T7B facing south.

Standing near T8A facing east adjacent to the wetland boundary of Wetland 2.

Standing near T8B within Wetland 2.

Appendix C:

Original Survey, Notes, and Bordner Map



Madison Springs
Original Survey Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

Site Boundary

N
W E
S

Project: DAN25-020-01

0 300 600 1,200
Feet

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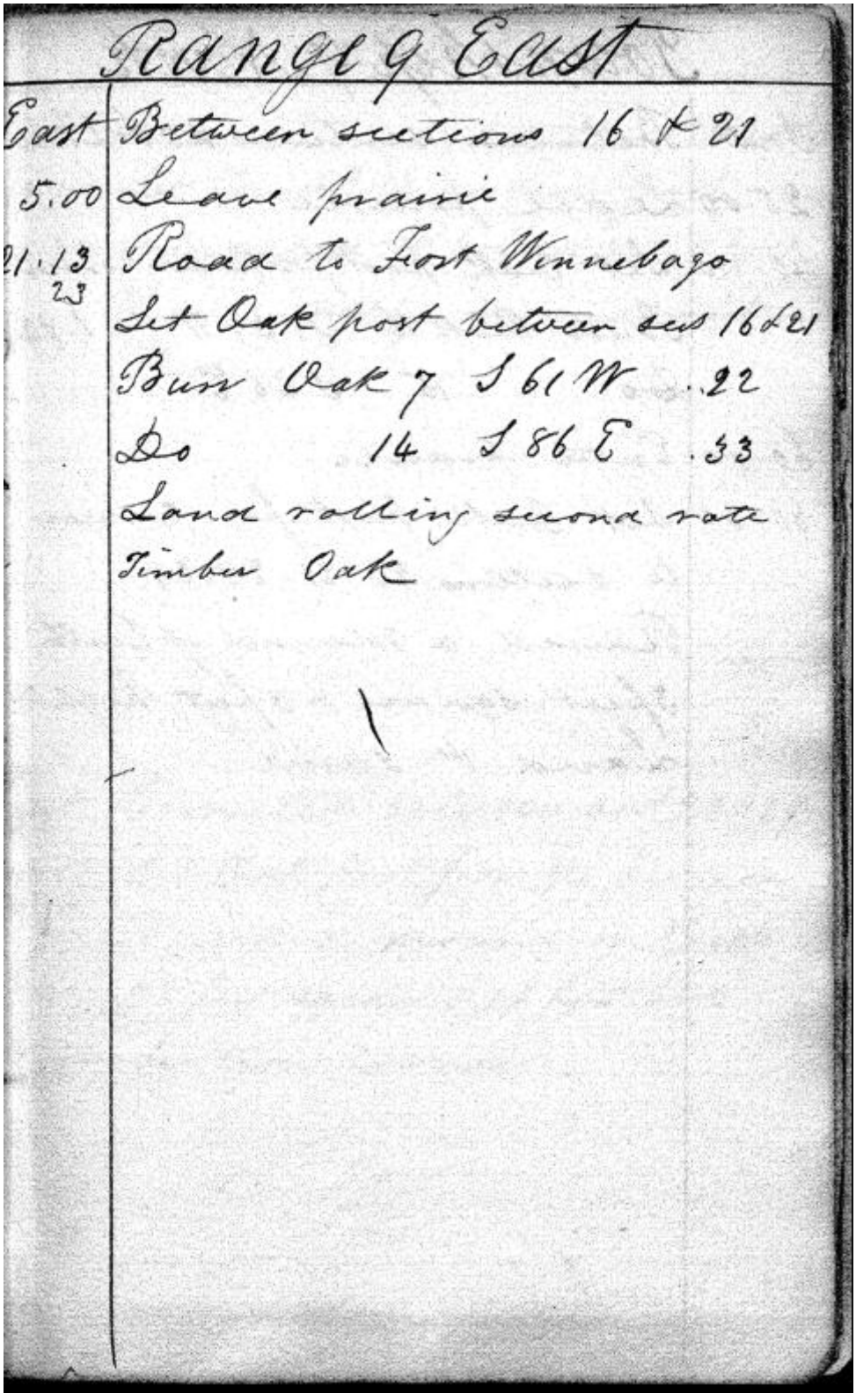


Range 9 East

East

Between sections 16 & 21

5.00 Leave prairie

21.13 Road to Fort Winnebago

23 Set Oak post between secs 16 & 21

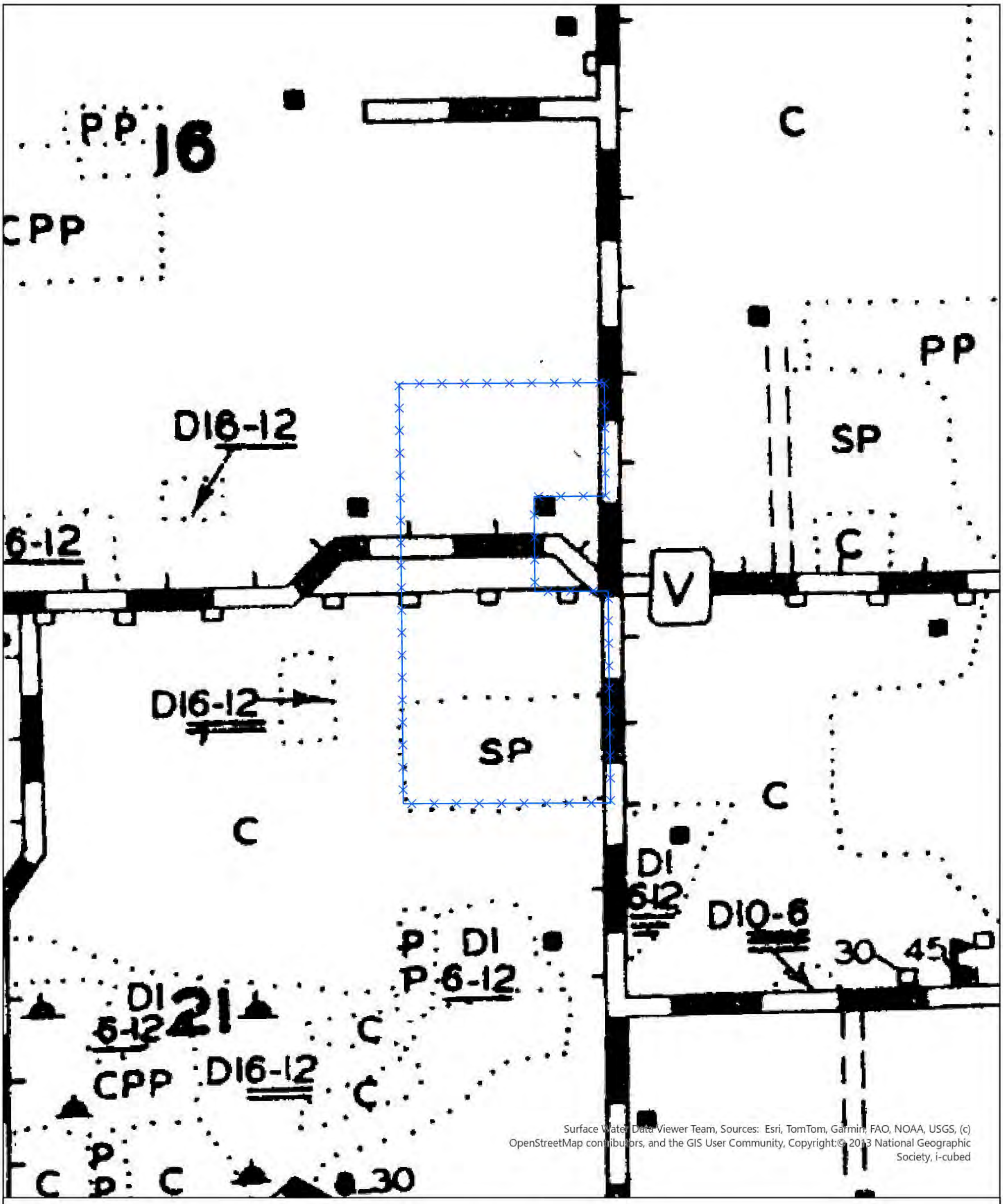
Burr Oak 7 S 61 W .22

Do 14 S 86 E .33

Land rolling second rate

Timber Oak

Original Survey Notes



Madison Springs
Bordner Survey Map
County Highway V & Patton Road
Town of Vienna
Dane County, WI

Legend

Site Boundary

N
W E
S

Project: DAN25-020-01

0 300 600 1,200
Feet

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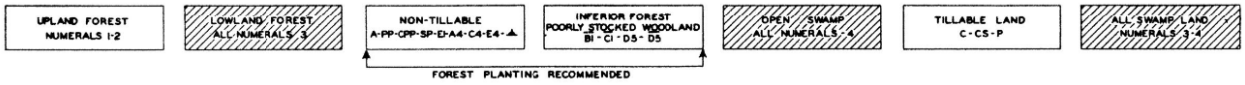
LEGEND



LAND COVER

·····	COVER BOUNDARY	C	CLEARED CROP LAND	D3	BALSAM
A	ABANDONED	C1	POPPLE WITH WHITE BIRCH	D4	LEATHER LEAF
A1	UPLAND HARDWOODS	C1	INFERIOR C1	D5	RECENT BURN
A2	HEMLOCK WITH HARDWOOD	C2	NORWAY PINE	D5	DEAD TIMBER
A3	SWAMP HARDWOODS	C3	TAMARACK	E1	PIN CHERRY
A4	TAGALDER, WILLOW, DOGWOOD ETC.	C4	GRASS MARSH	E4	WEEDY PEAT
		C4	SEDGE MARSH	F4	CRANBERRY MARSH
B	BIRCH	C5	CULTIVATED STUMP LAND	FP	FOREST PLANTATION
B1	HARDWOOD WITH CONIFERS	CPP	POOR LAND PREVIOUSLY CROPPED	O	OPEN
B1	INFERIOR B1	D	SCRUB OAK	P	PASTURE
B2	WHITE PINE	D1	OAK-HICKORY	PP	PERMANENT PASTURE
B3	WHITE CEDAR	D2	JACK PINE	RC	RED CEDAR
B4	CAT TAIL MARSH	D3	BLACK SPRUCE	SP	STUMP PASTURE
				TG	TRUCK GARDEN

ROADS

14 FEDERAL HIGHWAY 9 STATE HIGHWAY A COUNTY HIGHWAY

- HARD SURFACED ROAD
- IMPROVED GRAVEL ROAD
- UNIMPROVED GRAVEL ROAD
- IMPROVED DIRT ROAD
- UNIMPROVED DIRT ROAD
- TRAIL
- DRIVABLE FIRE LANE
- NON-DRIVABLE FIRE LANE
- TELEPHONE LINE
- POWER LINE
- RAILROAD
- ABANDONED RAILROAD

IMPROVEMENTS

- OCCUPIED HOUSE
- D VACANT HOUSE
- SUMMER HOME
- OCCUPIED SCHOOL
- S VACANT SCHOOL
- CHURCH
- TH TOWN HALL
- CHEESE FACTORY
- CREAMERY
- FILLING STATION OR GARAGE
- STORE
- TAVERN
- H HOTEL
- SAW MILL
- GRIST MILL
- FARM BLDG LESS THAN 100 FT. FROM CENTER OF ROAD
- LOGGING CAMP
- 6 INDICATES NO. OF HOUSES IN A GROUP
- 50 INDICATES THE NUMBER OF FEET BUILDING IS LOCATED FROM CENTER OF ROAD

MISCELLANEOUS SYMBOLS

Q	QUARRY	C	CEMETERY	GC	GOLF COURSE
G	GRAVEL PIT	N	NURSERY	BD	BEAVER DAM
S	SPRING	E	EROSION	PD	PUBLIC DUMP
F	FUR FARM	T	FIRE TOWER	Y	ORCHARD
	DRAINAGE DITCH		INTERMITTENT STREAM		CIVIL TOWN BOUNDARY

WOODED AREAS

DENSITY OF STAND

IS INDICATED BY THE LINE OR LINES BELOW THE DIAMETER

- D1 6-12 ONE LINE = GOOD STAND
- D1 6-12 TWO LINES = MEDIUM STAND
- D1 6-12 THREE LINES = POOR STAND
- D1 6-12 FOUR LINES = SCATTERED

DIAMETER CLASSES

NUMERALS 0-3, 3-6 ETC. PLACED AFTER A TIMBER SYMBOL (D1 6-12) INDICATES IN INCHES THE AVERAGE DIAMETER OF THE TREES BREAST HIGH (4½ FT.) WITHIN A GIVEN COVER AREA

ONE MILE

WISCONSIN STATE PLANNING BOARD — W.P.A. COOPERATING

WISCONSIN LAND ECONOMIC INVENTORY DIVISION — 411 W. WING - STATE CAPITOL — MADISON WISCONSIN

Appendix D:

Historic Aerial Photographs and Hydrology Assessment

Hydrology Assessment Review Areas

Hydrology Assessment with Aerial Imagery - Recording Form

Project Name: DAN25-020-01 | Date: September 2025 | County: Dane

Investigator: Chad Fradette | Legal Description (Sec, T, R): Sections 16 & 21, T09N, R09E

Year	Image Source	Climate Condition (wet, dry, normal)	Interpretation (List hydrology indicators observed, e.g. crop stress, drowned out, standing water, etc.)							
			A	B	C	D	E	F	G	H
1937	Dane County	#N/A	SS	AP						
1949	WHAIF	N	NSS	NSS						
1955	WHAIF	N	NSS	NSS						
1962	WHAIF	D	NSS	NSS						
1974	Dane County	W	CS	WS/CS						
1976	Dane County	N	NV	AP/WS						
1979	FSA	N	NV	AP/SS						
1980	FSA	N	NV	NC/WS						
1982	FSA	N	NV	NC/WS						
1983	FSA	N	SS	NC/WS						
1984	FSA	W	NSS	WS/SW						
1985	FSA	N	NV	AP/WS/SW						
1987	FSA	N	NV	AP/WS/SW						
1988	FSA	D	NV	WS/SW						
1989	FSA	D	NV	WS						
1990	FSA	N	NV	AP/WS/SS						
1991	FSA	N	No Image	WS						
1993	FSA	W	WS	AP/WS/SS/SW						
1994	FSA	N	NV	NC/WS/SW/SS						
1995	Dane County	N	NV	NC/WS/SW/SS						
1996	FSA	W	NSS	WS/SW						
1997	FSA	N	NV	NC/WS/SW						
1998	FSA	W	NV	NC/WS/SW						
1999	FSA	W	NV	NC/WS/SW						
2000	Dane County	W	NSS	NC/WS/SW						
2005	Google Earth	D	NSS	NC/WS/SW						
2006	USDA	N	WS	NC/WS/SS						
2008	USDA	W	NSS	NC/WS/SW/SS						
2010	USDA	W	NV	NC/WS/SW						
2012	Maxar Tech	D	NV	AP/WS/DO/SW						
2013	WHAIF	W	WS	NC/WS						
2014	Google Earth	W	NSS	NC/WS/SW						
2017	WHAIF	W	WS	NC/WS/SS/SW						
2018	Google Earth	W	NSS	NC/WS/SW						
2020	Google Earth	N	NV	NC/WS/SW						
2021	Google Earth	N	NV	NC/WS/SW						
2022	Google Earth	N	NSS	NC/WS/SW/SS						
2024	Airbus	W	WS	NC/WS/SS/SW						
Summary Table			**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
# Normal Yrs.			17	18						
# Normal Yrs. With wet signature			2	16						
% Normal Yrs. With wet signature			12%	89%						

*Use key below to label photo 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 below.

Key	
WS- Wetland Signatures	AP - altered pattern
CS - Vegetation Stress	NV - normal vegetative cover
DO - drowned out	SW - standing water
NC - not cropped	SS/NSS - Soil Signature/No Soil Signature

Field data sheet reference (if applicable):	

Wetland Determination from Aerial Imagery – Recording Form

Project Name:	DAN25-020-01
Investigator:	Chad Fradette
County:	Dane

Date:	Sep-25
Legal Description (S, T, R):	Sections 16 & 21, T09N, R09E

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	12%	N/A	No
B	Yes	Yes	89%	N/A	Yes

***1 Answer "N/A" if field verification is not required.**

1937 Dane County

1949 WHAIF

1955 WHAIF

1962 WHAIF

1974 Dane County

1976 Dane County

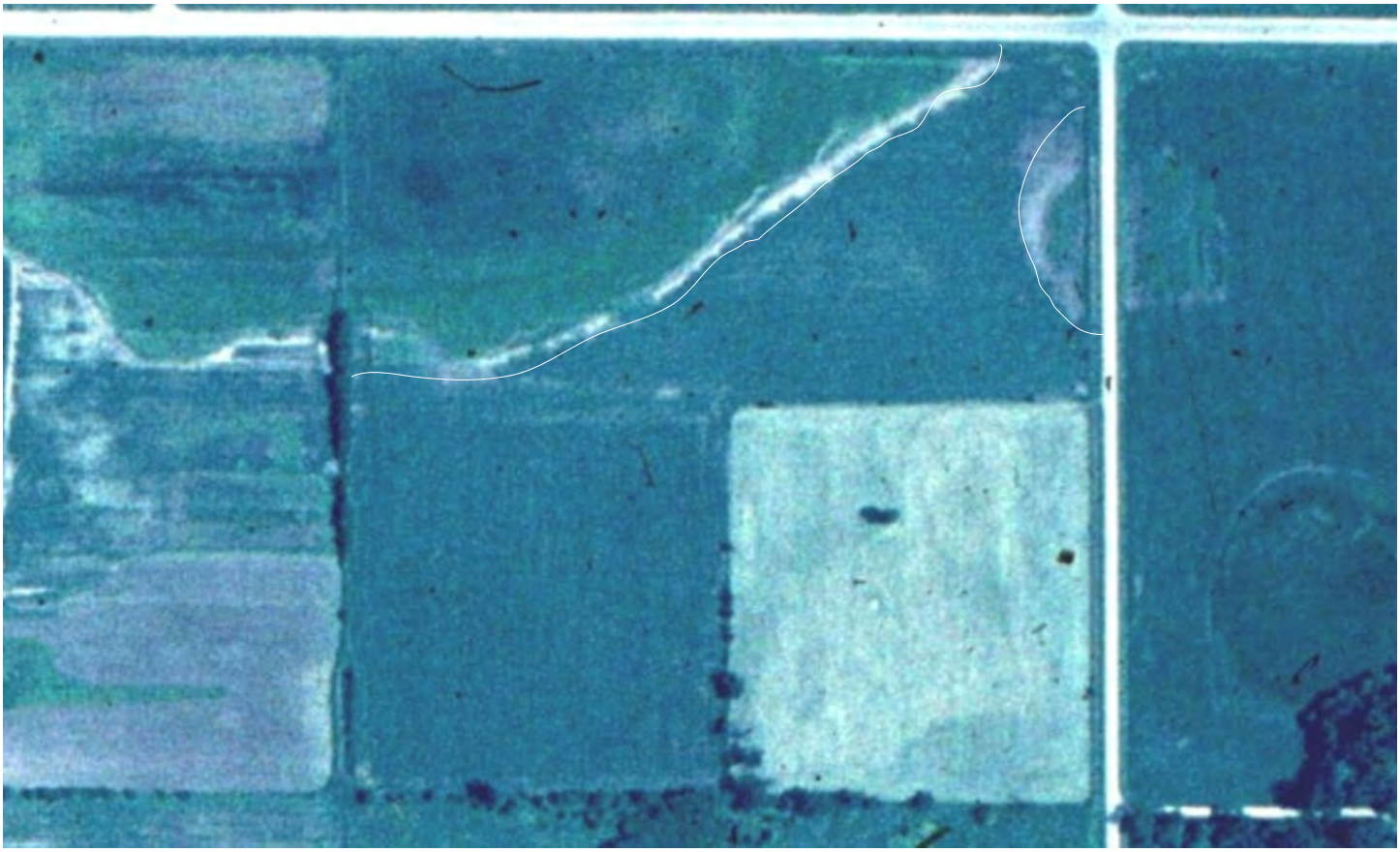
1979 North FSA

1979 South FSA

1980 North FSA

1980 South FSA

1982 North FSA



1982 South FSA

1983 North FSA

1983 South FSA

1984 North FSA

1984 South FSA

1985 North FSA

1985 South FSA

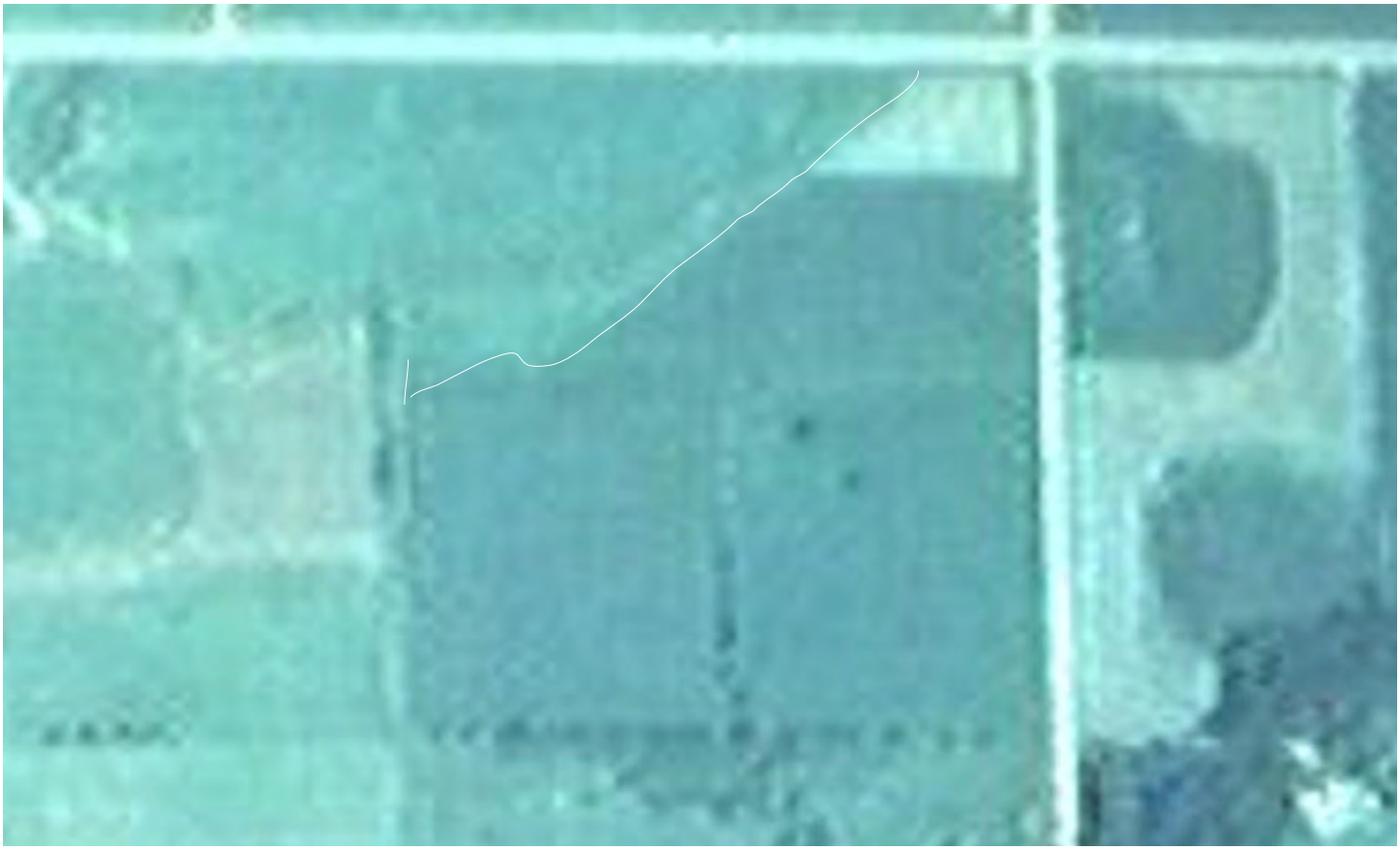
1987 North FSA

1987 South FSA

1988 North FSA

1988 South FSA

1989 North FSA



1989 South FSA

1990 North FSA

1990 South FSA

1991 FSA

1993 FSA

1994 FSA

1995 Dane County

1996 FSA

1997 FSA

1998 FSA

1999 FSA

2000 Dane County

2005 Google Earth

2006 USDA

2008 USDA

2010 USDA

2012 Maxar Technologies

2013 WHAIF

2014 Google Earth

2017 WHAIF

2018 Google Earth

2020 Google Earth

2021 Google Earth

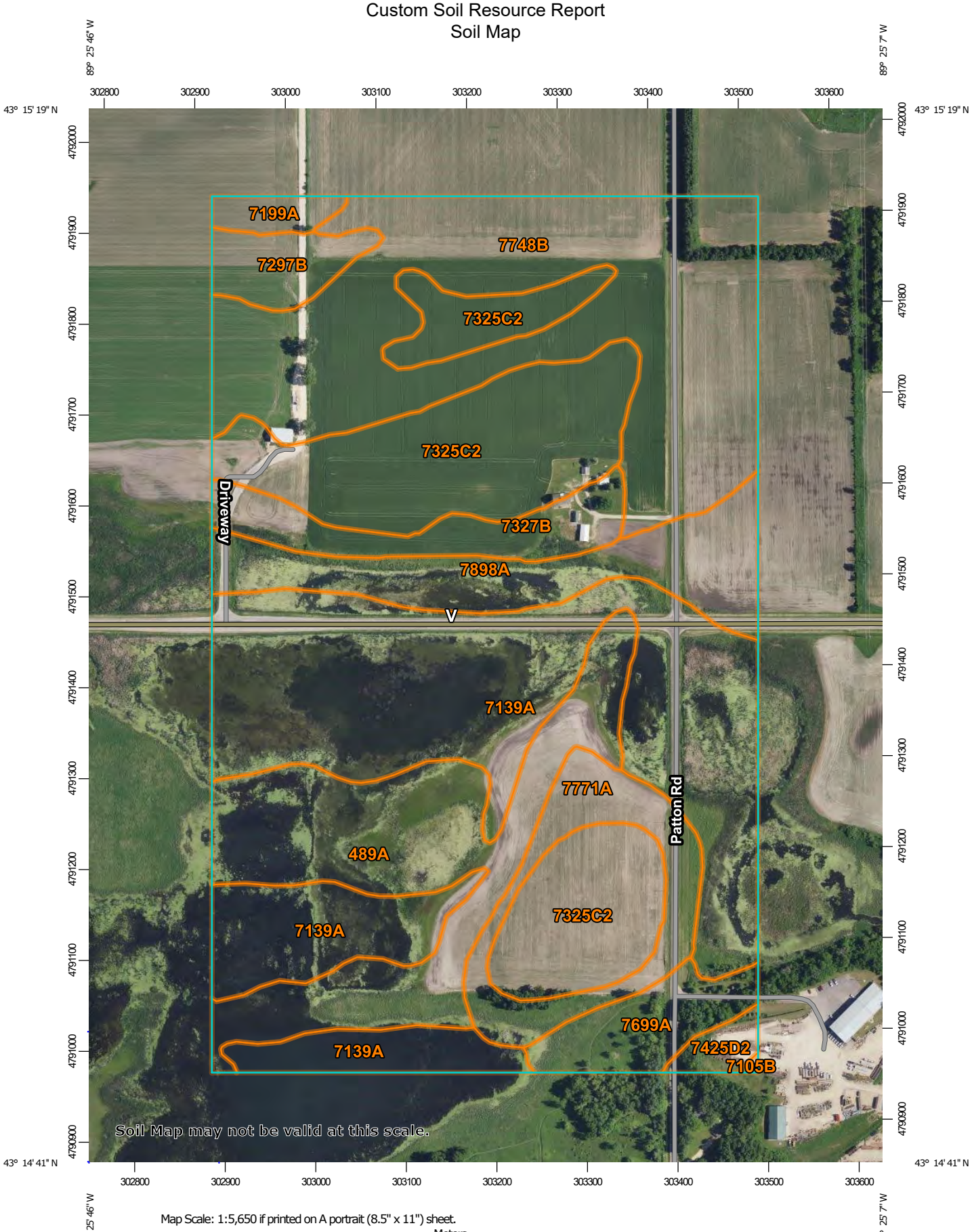
2022 Google Earth

2024 Airbus

Appendix E:

NRCS County Soil Survey Report

Custom Soil Resource Report
Soil Map



Map Scale: 1:5,650 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Dane County, Wisconsin
Survey Area Data: Version 24, Sep 10, 2025

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

Date(s) aerial images were photographed: Jun 13, 2020—Jul 31, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
489A	Marshan silt loam	19.1	13.3%
7105B	Batavia silt loam, gravelly substratum, 2 to 6 percent slopes	0.1	0.0%
7139A	Sable silty clay loam, 0 to 2 percent slopes	39.4	27.3%
7199A	Plano silt loam, till substratum, 0 to 2 percent slopes	1.3	0.9%
7297B	Ringwood silt loam, 2 to 6 percent slopes	2.9	2.0%
7325C2	Dresden silt loam, 6 to 12 percent slopes, eroded	24.0	16.6%
7327B	Kegonsa silt loam, 2 to 6 percent slopes	5.3	3.7%
7425D2	Dresden loam, 12 to 20 percent slopes, eroded	1.1	0.8%
7699A	Salter sandy loam, wet variant, 0 to 3 percent slopes	4.3	3.0%
7748B	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	30.5	21.1%
7771A	Hayfield silt loam, 0 to 3 percent slopes	6.6	4.6%
7898A	Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	9.7	6.7%
Totals for Area of Interest		**144.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Dane County, Wisconsin

489A—Marshan silt loam

Map Unit Setting

National map unit symbol: t93l
Elevation: 340 to 1,700 feet
Mean annual precipitation: 28 to 33 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 100 to 160 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Marshan and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Marshan

Setting

Landform: Depressions on stream terraces
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty or loamy alluvium over sandy outwash

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 24 inches: silty clay loam
H3 - 24 to 60 inches: coarse sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F095XB002WI - Wet Floodplain
Forage suitability group: Mod AWC, high water table (G095BY004WI)
Other vegetative classification: Mod AWC, high water table (G095BY004WI)
Hydric soil rating: Yes

Minor Components

Sable

Percent of map unit: 5 percent
Landform: Depressions on stream terraces

Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R108XB008IL - Wet Loess Upland Prairie
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: Yes

Hayfield

Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Other vegetative classification: Mod AWC, high water table (G095BY004WI)
Hydric soil rating: No

Palms

Percent of map unit: 2 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Other vegetative classification: Not suited, flooded or organics (G095BY010WI)
Hydric soil rating: Yes

7105B—Batavia silt loam, gravelly substratum, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: t919
Elevation: 340 to 1,200 feet
Mean annual precipitation: 28 to 33 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Batavia, gravelly substratum, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Batavia, Gravelly Substratum

Setting

Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Deep loess over loamy outwash

Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 44 inches: silty clay loam
H3 - 44 to 50 inches: gravelly clay loam
H4 - 50 to 60 inches: gravelly coarse sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components

Kegonsa

Percent of map unit: 5 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Virgil, gravelly substratum

Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Port byron, moderately well drained

Percent of map unit: 2 percent
Landform: Valley sides
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R105XY014WI - Mollic Clayey Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

7139A—Sable silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tjpl
Elevation: 640 to 1,130 feet
Mean annual precipitation: 30 to 40 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Sable and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sable

Setting

Landform: Swales
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loess

Typical profile

Ap - 0 to 23 inches: silty clay loam
Btg1 - 23 to 38 inches: silty clay loam
Btg2 - 38 to 47 inches: silt loam
Cg - 47 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R108XB008IL - Wet Loess Upland Prairie
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)

Hydric soil rating: Yes

Minor Components

Ipava

Percent of map unit: 5 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R108XB008IL - Wet Loess Upland Prairie
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Muscatune

Percent of map unit: 5 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Buckhart

Percent of map unit: 3 percent
Landform: Knolls
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R108XB005IL - Loess Upland Prairie
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Elburn

Percent of map unit: 2 percent
Landform: Outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB002WI - Wet Floodplain
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

7199A—Plano silt loam, till substratum, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tjwr
Elevation: 640 to 1,070 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 127 to 178 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Plano, till substratum, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plano, Till Substratum

Setting

Landform: Till plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over glacial loamy till

Typical profile

Ap - 0 to 11 inches: silt loam
Bt1 - 11 to 41 inches: silty clay loam
2Bt2 - 41 to 46 inches: loam
2C - 46 to 79 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 40 to 45 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)

Hydric soil rating: No

Minor Components

Elburn

Percent of map unit: 10 percent
Landform: Till plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB002WI - Wet Floodplain
Hydric soil rating: No

7297B—Ringwood silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2wsr1
Elevation: 770 to 1,180 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 172 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ringwood and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ringwood

Setting

Landform: Moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 12 inches: silt loam
Bt - 12 to 22 inches: silty clay loam
2Bt - 22 to 36 inches: sandy clay loam
2C - 36 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components

Elburn

Percent of map unit: 4 percent
Landform: Drainageways
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F095XB002WI - Wet Floodplain
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Plano, till substratum

Percent of map unit: 3 percent
Landform: Moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Griswold

Percent of map unit: 3 percent
Landform: Moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

7325C2—Dresden silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2wspw
Elevation: 750 to 1,180 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 132 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Dresden, eroded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dresden, Eroded

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy glaciofluvial deposits over calcareous sandy and gravelly outwash

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 25 inches: clay loam
2Bt2 - 25 to 30 inches: gravelly sandy clay loam
2C - 30 to 79 inches: very gravelly coarse sand

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 29 to 40 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F095XB007WI - Loamy Upland with Carbonates

Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Casco, eroded
Percent of map unit: 5 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Kegonsa
Percent of map unit: 5 percent
Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

7327B—Kegonsa silt loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: t93f
Elevation: 400 to 1,200 feet
Mean annual precipitation: 28 to 33 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Kegonsa and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kegonsa

Setting
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over sandy and gravelly outwash

Typical profile
H1 - 0 to 12 inches: silt loam

H2 - 12 to 29 inches: silt loam
H3 - 29 to 33 inches: sandy clay loam
H4 - 33 to 60 inches: gravelly coarse sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components

Batavia, gravelly substratum

Percent of map unit: 5 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Dresden, silt loam

Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Warsaw

Percent of map unit: 2 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

7425D2—Dresden loam, 12 to 20 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2wspx
Elevation: 790 to 1,120 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 172 days
Farmland classification: Not prime farmland

Map Unit Composition

Dresden, eroded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dresden, Eroded

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy drift over calcareous sandy and gravelly outwash

Typical profile

Ap - 0 to 6 inches: loam
Bt1 - 6 to 22 inches: sandy clay loam
2Bt2 - 22 to 26 inches: very gravelly sandy clay loam
2C - 26 to 79 inches: stratified very gravelly coarse sand

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F095XB007WI - Loamy Upland with Carbonates

Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

Minor Components

Casco, eroded
Percent of map unit: 6 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Lorenzo, eroded
Percent of map unit: 4 percent
Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

7699A—Salter sandy loam, wet variant, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: t951
Elevation: 600 to 1,500 feet
Mean annual precipitation: 28 to 33 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Salter variant, somewhat poorly drained, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Salter Variant, Somewhat Poorly Drained

Setting
Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

Parent material: Loamy alluvium over stratified silt and fine sand lacustrine deposits

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 26 inches: loam
H3 - 26 to 39 inches: loamy sand
H4 - 39 to 60 inches: stratified loamy sand to silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Forage suitability group: Mod AWC, high water table (G095BY004WI)
Other vegetative classification: Mod AWC, high water table (G095BY004WI)
Hydric soil rating: No

Minor Components

Salter, mwd, silt mantle

Percent of map unit: 5 percent
Landform: Lake plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Wacousta

Percent of map unit: 3 percent
Landform: Depressions on glacial lakes
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: Yes

Colwood

Percent of map unit: 2 percent
Landform: Depressions on lakebeds (relict)
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland

Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: Yes

7748B—Plano silt loam, gravelly substratum, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2tjwz
Elevation: 720 to 1,120 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 174 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Plano, gravelly substratum, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plano, Gravelly Substratum

Setting

Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy outwash over sandy and gravelly outwash

Typical profile

Ap - 0 to 14 inches: silt loam
Bt1 - 14 to 46 inches: silty clay loam
2Bt2 - 46 to 57 inches: loam
2C - 57 to 79 inches: stratified gravelly sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland

Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components

Warsaw
Percent of map unit: 8 percent
Landform: Outwash plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

Plano, moderately wet, gravelly substratum
Percent of map unit: 7 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

7771A—Hayfield silt loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: t931
Elevation: 680 to 1,400 feet
Mean annual precipitation: 28 to 33 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Hayfield and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hayfield

Setting
Landform: Outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium over sandy outwash

Typical profile
H1 - 0 to 11 inches: silt loam
H2 - 11 to 29 inches: loam

H3 - 29 to 60 inches: coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Forage suitability group: Mod AWC, high water table (G095BY004WI)
Other vegetative classification: Mod AWC, high water table (G095BY004WI)
Hydric soil rating: No

Minor Components

Dresden, silt loam

Percent of map unit: 5 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Kegonsa

Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Marshan

Percent of map unit: 2 percent
Landform: Depressions on stream terraces
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB002WI - Wet Floodplain
Other vegetative classification: Mod AWC, high water table (G095BY004WI)
Hydric soil rating: Yes

7898A—Elburn silt loam, gravelly substratum, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wsqt
Elevation: 740 to 1,000 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 185 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Elburn, gravelly substratum, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elburn, Gravelly Substratum

Setting

Landform: Till plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loess over sandy and gravelly outwash

Typical profile

Ap - 0 to 16 inches: silt loam
Bt - 16 to 36 inches: silty clay loam
2BC - 36 to 44 inches: sandy loam
2C - 44 to 79 inches: very gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)

Hydric soil rating: No

Minor Components

Drummer

Percent of map unit: 4 percent
Landform: Drainageways
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

Sable

Percent of map unit: 4 percent
Landform: Drainageways
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

Mahalasville

Percent of map unit: 2 percent
Landform: Drainageways
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB002WI - Wet Floodplain
Hydric soil rating: Yes

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit (WI)

This Hydric Soil Category rating indicates the components of map units that meet the criteria for hydric soils. Map units are composed of one or more major soil components or soil types that generally make up 20 percent or more of the map unit and are listed in the map unit name, and they may also have one or more minor contrasting soil components that generally make up less than 20 percent of the map unit. Each major and minor map unit component that meets the hydric criteria is rated **hydric.** The map unit class ratings based on the hydric components present are: WI Hydric, WI Predominantly Hydric, WI Partially Hydric, WI Predominantly Nonhydric, and WI Nonhydric. The report also shows the total representative percentage of each map unit that the hydric components comprise.

"WI Hydric" means that all major and minor components listed for a given map unit are rated as being hydric. *"WI Predominantly Hydric"* means that all major components listed for a given map unit are rated as hydric, and at least one contrasting minor component is not rated hydric.*"WI Partially Hydric"* means that at least one major component listed for a given map unit is rated as hydric, and at

least one other major component is not rated hydric. *"WI Predominantly Nonhydric"* means that no major component listed for a given map unit is rated as hydric, and at least one contrasting minor component is rated hydric. *"WI Nonhydric"* means no major or minor components for the map unit are rated hydric. The assumption is that the map unit is nonhydric even if none of the components within the map unit have been rated.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

If soils are wet enough for a long enough period of time to be considered hydric, they typically exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Vasilas, Hurt, and Noble, 2010).

The NTCHS has developed criteria to identify those soil properties unique to hydric soils (Federal Register, 2012). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria use selected soil properties that are described in “Field Indicators of Hydric Soils in the United States” (Vasilas, Hurt, and Noble, 2010), "Soil Taxonomy" (Soil Survey Staff, 1999), "Keys to Soil Taxonomy" (Soil Survey Staff, 2010), and the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

The criteria for hydric soils are represented by codes, for example, 2 or 3. Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. February, 28, 2012. Hydric soils of the United States.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Rating by Map Unit (WI)

Hydric Rating by Map Unit (WI)–Dane County, Wisconsin				
Map Unit Symbol	**Map Unit Name**	**Hydric Percent of Map Unit**	**Hydric Category**	**Landform Hydric Minor Components**
489A	Marshan silt loam	97	WI Predominantly Hydric	Depressions
7105B	Batavia silt loam, gravelly substratum, 2 to 6 percent slopes	0	WI Nonhydric	—
7139A	Sable silty clay loam, 0 to 2 percent slopes	85	WI Predominantly Hydric	—
7199A	Plano silt loam, till substratum, 0 to 2 percent slopes	0	WI Nonhydric	—
7297B	Ringwood silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
7325C2	Dresden silt loam, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
7327B	Kegonsa silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
7425D2	Dresden loam, 12 to 20 percent slopes, eroded	0	WI Nonhydric	—
7699A	Salter sandy loam, wet variant, 0 to 3 percent slopes	5	WI Predominantly Nonhydric	Lakebeds (relict)
7748B	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	0	WI Nonhydric	—
7771A	Hayfield silt loam, 0 to 3 percent slopes	2	WI Predominantly Nonhydric	Stream terraces
7898A	Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	10	WI Predominantly Nonhydric	Drainageways

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is

recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:

   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–WI025-Dane County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
489A: Marshan silt loam	Marshan	90	Depressions on stream terraces	Yes	2,3
	Sable	5	Depressions on stream terraces	Yes	2,3
	Hayfield	3	Outwash plains	No	—
	Palms	2	Depressions	Yes	1,3
7105B: Batavia silt loam, gravelly substratum, 2 to 6 percent slopes	Batavia-Gravelly substratum	90	Outwash plains	No	—
	Kegonsa	5	Outwash plains	No	—
	Virgil-Gravelly substratum	3	Outwash plains	No	—
	Port Byron-Moderately well drained	2	Valley sides	No	—
7139A: Sable silty clay loam, 0 to 2 percent slopes	Sable	85-100	Swales	Yes	2
	Ipava	0-7	Ground moraines	No	—
	Muscatune	0-6	Ground moraines	No	—
	Buckhart	0-4	Knolls	No	—
	Elburn	0-3	Outwash plains	No	—
7199A: Plano silt loam, till substratum, 0 to 2 percent slopes	Plano-Till substratum	85-95	Till plains	No	—
	Elburn	5-15	Till plains	No	—
7297B: Ringwood silt loam, 2 to 6 percent slopes	Ringwood	85-95	Moraines	No	—
	Elburn	2-6	Drainageways	No	—
	Plano-Till substratum	1-4	Moraines	No	—
	Griswold	2-5	Moraines	No	—
7325C2: Dresden silt loam, 6 to 12 percent slopes, eroded	Dresden-Eroded	85-95	Plains	No	—
	Casco-Eroded	3-8	Moraines	No	—
	Kegonsa	2-7	Plains	No	—
7327B: Kegonsa silt loam, 2 to 6 percent slopes	Kegonsa	90	Outwash plains	No	—
	Batavia-Gravelly substratum	5	Outwash plains	No	—
	Dresden-Silt loam	3	Outwash plains	No	—
	Warsaw	2	Outwash plains	No	—

Hydric Soil List - All Components–WI025-Dane County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
7425D2: Dresden loam, 12 to 20 percent slopes, eroded	Dresden-Eroded	85-95	Plains	No	—
	Casco-Eroded	3-8	Moraines	No	—
	Lorenzo-Eroded	2-7	Plains	No	—
7699A: Salter sandy loam, wet variant, 0 to 3 percent slopes	Salter variant-Somewhat poorly drained	90	Drainageways	No	—
	Salter-Mwd, silt mantle	5	Lake plains	No	—
	Wacousta	3	Depressions on glacial lakes	Yes	2,3
	Colwood	2	Depressions on lakebeds (relict)	Yes	2,3
7748B: Plano silt loam, gravelly substratum, 2 to 6 percent slopes	Plano-Gravelly substratum	80-90	Outwash plains	No	—
	Warsaw	5-10	Outwash plains	No	—
	Plano-Moderately wet, gravelly substratum	5-10	Outwash plains	No	—
7771A: Hayfield silt loam, 0 to 3 percent slopes	Hayfield	90	Outwash plains	No	—
	Dresden-Silt loam	5	Outwash plains	No	—
	Kegonsa	3	Outwash plains	No	—
	Marshan	2	Depressions on stream terraces	Yes	2,3
7898A: Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	Elburn-Gravelly substratum	85-95	Till plains	No	—
	Drummer	2-5	Drainageways	Yes	2,3
	Sable	2-5	Drainageways	Yes	2,3
	Mahalasville	1-5	Drainageways	Yes	2,3

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:

A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:
Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
Federal Register. September 18, 2002. Hydric soils of the United States.
Federal Register. July 13, 1994. Changes in hydric soils of the United States.
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
National Research Council. 1995. Wetlands: Characteristics and boundaries.
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Report—Hydric Soils

Hydric Soils–Dane County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
489A—Marshan silt loam				
	Marshan	90	Depressions on stream terraces	2, 3
	Sable	5	Depressions on stream terraces	2, 3
	Palms	2	Depressions	1, 3
7139A—Sable silty clay loam, 0 to 2 percent slopes				
	Sable	85	Swales	2
7699A—Salter sandy loam, wet variant, 0 to 3 percent slopes				
	Wacousta	3	Depressions on glacial lakes	2, 3
	Colwood	2	Depressions on lakebeds (relict)	2, 3

Hydric Soils–Dane County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
7771A—Hayfield silt loam, 0 to 3 percent slopes				
	Marshan	2	Depressions on stream terraces	2, 3
7898A—Elburn silt loam, gravelly substratum, 0 to 3 percent slopes				
	Drummer	4	Drainageways	2, 3
	Sable	4	Drainageways	2, 3
	Mahalasville	2	Drainageways	2, 3

Taxonomic Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. This table shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol.* An example is Alfisols.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalfs (*Ud*, meaning humid, plus *alfs*, from Alfisols).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalfs*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-

size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

References:
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. (The soils in a given survey area may have been classified according to earlier editions of this publication.)

Report—Taxonomic Classification of the Soils

[An asterisk by the soil name indicates a taxadjunct to the series]

Taxonomic Classification of the Soils–Dane County, Wisconsin	
Soil name	**Family or higher taxonomic classification**
Batavia	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Buckhart	
Casco	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Inceptic Hapludalfs
Colwood	Fine-loamy, mixed, active, mesic Typic Endoaquolls
Dresden	Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Mollic Hapludalfs
Drummer	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Elburn	
Elburn	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Elburn	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Griswold	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Hayfield	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Aquollic Hapludalfs
Ipava	Fine, smectitic, mesic Aquic Argiudolls
Kegonsa	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs
Lorenzo	Fine-loamy over sandy or sandy-skeletal, active, mesic Typic Argiudolls
Mahalasville	Fine-silty, mixed, superactive, mesic Typic Argiaquolls
Marshan	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls
Muscatune	
Palms	Loamy, mixed, euic, mesic Terric Haplosaprists
Plano	
Plano	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Plano	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Port Byron*	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludolls
Ringwood	Fine-loamy, mixed, superactive, mesic Typic Argiudolls

Taxonomic Classification of the Soils–Dane County, Wisconsin	
Soil name	**Family or higher taxonomic classification**
Sable	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Salter*	Coarse-loamy, mixed, superactive, mesic Oxyaquic Eutrudepts
Salter variant	Coarse-loamy, mixed, mesic Aeric Haplaquents
Virgil	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Wacousta	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Warsaw	
Warsaw	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Argiudolls

Appendix F:

Precipitation Information

Coordinates	43.25298, -89.42211
Observation Date	2025-09-07
Elevation (ft)	985.417
Drought Index (PDSI)	Mild wetness
WebWIMP H_2O Balance	Wet Season

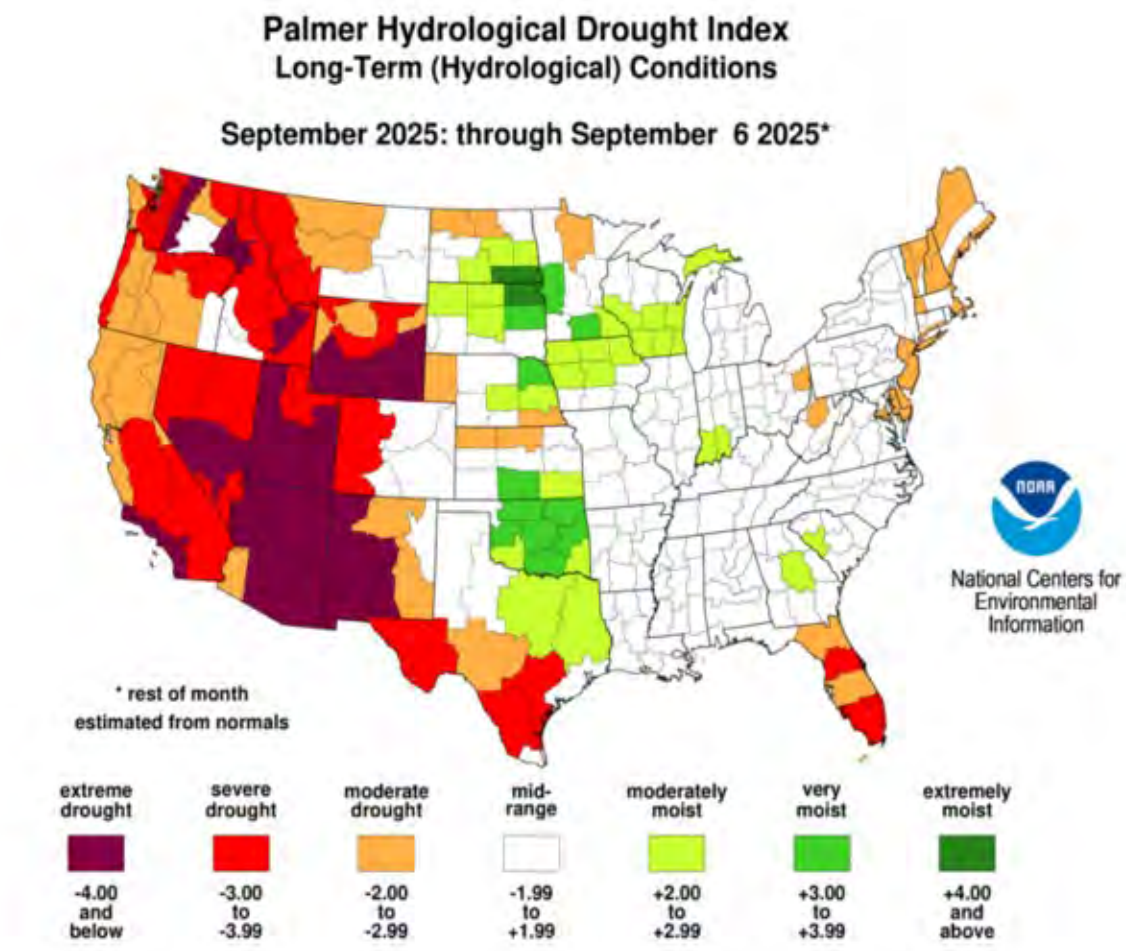
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-09-07	2.194095	4.08189	3.070866	Normal	2	3	6
2025-08-08	3.36811	4.580709	3.996063	Normal	2	2	4
2025-07-09	3.809055	6.082677	4.988189	Normal	2	1	2
Result							Normal Conditions - 12

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

US Army Corps of Engineers.
ERDC

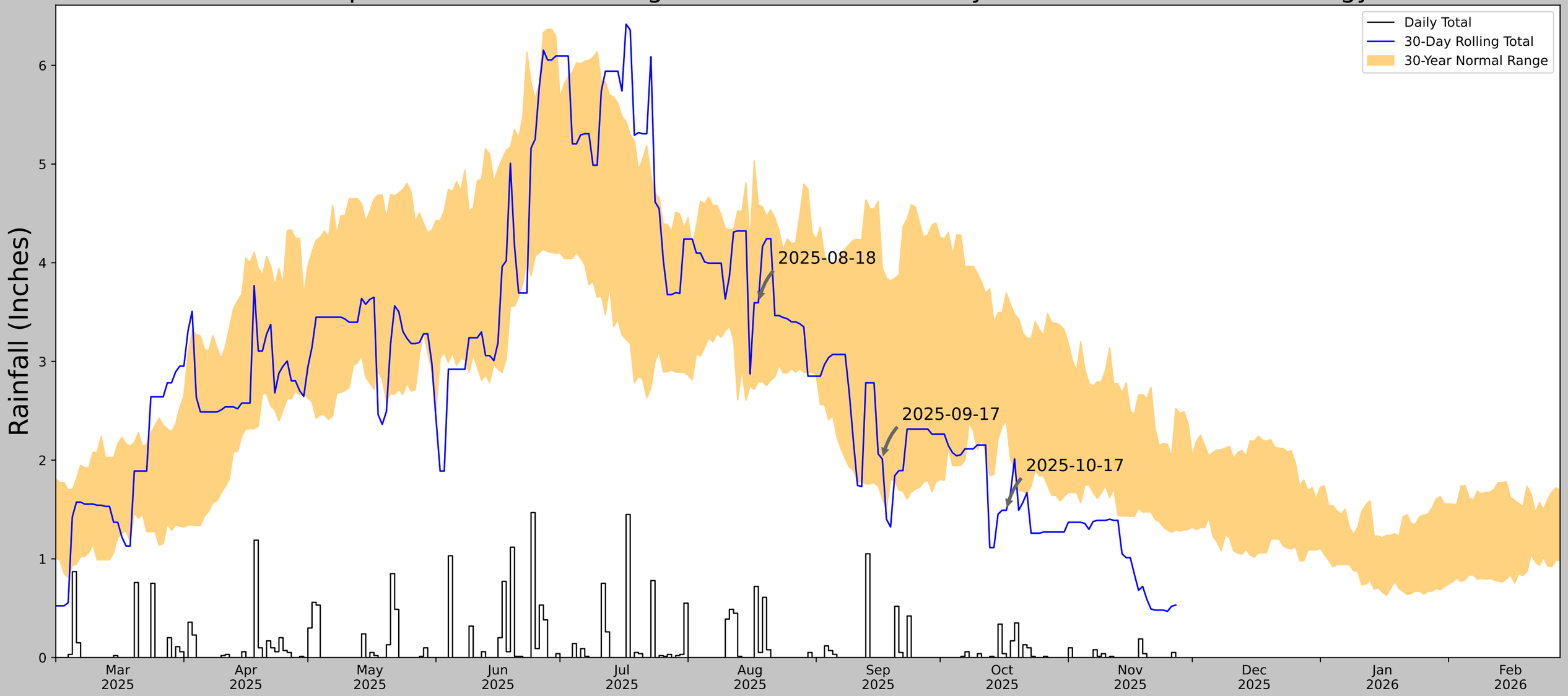
Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ARLINGTON	43.3042, -89.3453	1051.837	5.24	66.42	2.706	10902	90
SUN PRAIRIE 3 W	43.1936, -89.2822	950.131	8.275	101.706	4.565	7	0
LODI WWTP	43.3217, -89.5311	803.15	9.419	248.687	6.581	127	0
MADISON DANE CO RGNL AP	43.1406, -89.3453	858.924	11.304	192.913	7.267	317	0



Sources: National Oceanic & Atmospheric Administration, Palmer Hydrological Drought Index

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



Coordinates	43.25299, -89.42215
Observation Date	2025-10-17
Elevation (ft)	986.076
Drought Index (PDSI)	Mild wetness
WebWIMP H_2O Balance	Wet Season

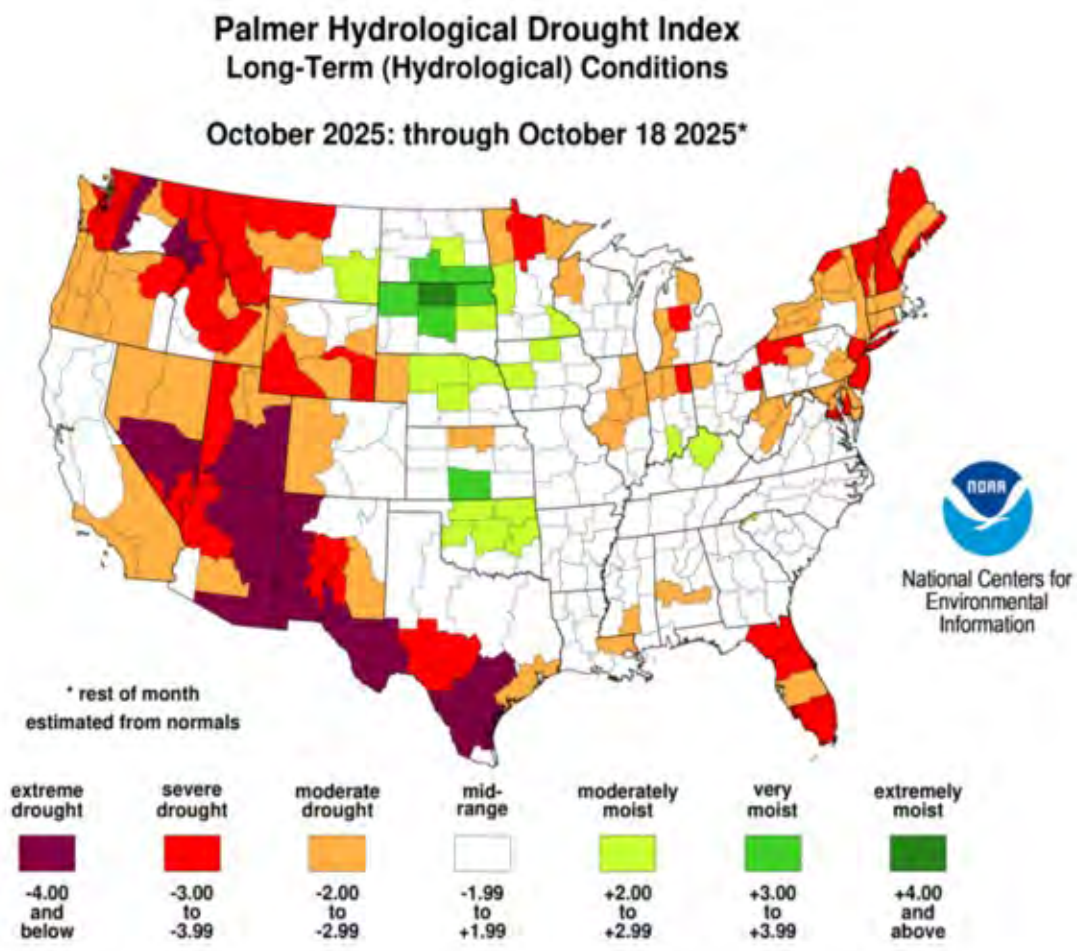
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-10-17	2.395669	3.694095	1.492126	Dry	1	3	3
2025-09-17	1.616535	3.952362	2.011811	Normal	2	2	4
2025-08-18	2.79252	4.587402	3.594488	Normal	2	1	2
Result							Drier than Normal - 9

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ARLINGTON	43.3042, -89.3453	1051.837	5.241	65.761	2.703	10902	90
SUN PRAIRIE 3 W	43.1936, -89.2822	950.131	8.275	101.706	4.565	7	0
LODI WWTP	43.3217, -89.5311	803.15	9.419	248.687	6.581	127	0
MADISON DANE CO RGNL AP	43.1406, -89.3453	858.924	11.304	192.913	7.267	317	0



Sources: National Oceanic & Atmospheric Administration, Palmer Hydrological Drought Index

Appendix G:

Wetland Determination Data Forms

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring City/County: Town of Vienna, Dane County Sampling Date: 2025-09-07

Applicant/Owner: Excel/Keller State: Wisconsin Sampling Point: T1A

Investigator(s): Chad M Fradette Section, Township, Range: S16 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 2-4

Subregion (LRR or MLRA): L 95 Lat: 43.252987 Long: -89.422147 Datum: WGS 84

Soil Map Unit Name: PoB - Plano silt loam, gravelly substratum, 2 to 6 percent slopes NWI classification: None

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

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

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

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

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

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

Sample plot is in a corn field.

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

Wetland Hydrology Present? Yes ____ No ✔

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

Antecedent precipitation has been normal during the wet season. The drought index indicates mild wetness.

Remarks:

No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T1A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Morus rubra	5	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5 =Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Anemone canadensis	40	✔	FACW
2. Bromus inermis	30	✔	UPL
3. Setaria viridis	20		UPL
4. Panicum virgatum	10		FAC
5. Ambrosia trifida	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 33.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	5	x 4 =	20
UPL species	50	x 5 =	250
Column Totals:	110 (A)		395 (B)

Prevalence Index = B/A = 3.59

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 ✔

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

Disturbed vegetation protocol used, reviewed undisturbed vegetation in a similar landscape position. No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T1A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 20	10YR 3/2	100					Silt Loam	
20 - 24	7.5YR 4/3	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

No hydric soil indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring City/County: Town of Vienna, Dane County Sampling Date: 2025-09-07

Applicant/Owner: Excel/Keller State: Wisconsin Sampling Point: T2A

Investigator(s): Chad M Fradette Section, Township, Range: S16 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 2-3

Subregion (LRR or MLRA): L 95 Lat: 43.25095 Long: -89.4239451 Datum: WGS 84

Soil Map Unit Name: KeB - Kegonsa silt loam, 2 to 6 percent slopes NWI classification: None

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

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

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

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

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

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

Sample plot is in a corn field.

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

Wetland Hydrology Present? Yes ____ No ✔

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

Antecedent precipitation has been normal during the wet season. The drought index indicates mild wetness.

Remarks:

No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T2A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Morus rubra	5	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5 =Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Anemone canadensis	40	✔	FACW
2. Bromus inermis	30	✔	UPL
3. Setaria viridis	20		UPL
4. Panicum virgatum	10		FAC
5. Ambrosia trifida	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 33.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	5	x 4 =	20
UPL species	50	x 5 =	250
Column Totals:	110 (A)		395 (B)

Prevalence Index = B/A = 3.59

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 ✔

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

Disturbed vegetation protocol used, reviewed undisturbed vegetation in a similar landscape position. No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T2A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 24	10YR 2/2	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

No hydric soil indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring City/County: Town of Vienna, Dane County Sampling Date: 2025-09-07
Applicant/Owner: Excel/Keller State: Wisconsin Sampling Point: T2B
Investigator(s): Chad M Fradette Section, Township, Range: S16 T9N R9E
Landform (hillside, terrace, etc.): Closed Depression Local relief (concave, convex, none): Concave Slope %: 0-2
Subregion (LRR or MLRA): L 95 Lat: 43.2507778 Long: -89.4239206 Datum: WGS 84
Soil Map Unit Name: EgA - Elburn silt loam, gravelly substratum, 0 to 3 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

Sample plot is in a wet meadow that surrounds a shallow cattail marsh. The wetland boundary was set at the point where the F6 hydric soil indicator dropped out in the adjacent corn field. This was approximately where the slope percentage dropped from 2-3% to 1-2%, toeslope. The boundary was probed at regular intervals to make this determination. Flags were not left in the corn to prevent them from entering cattle feed. The boundary was continuously surveyed.

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 ✔	Depth (inches): ___
Water Table Present?	Yes ✔	No ___	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 6

Wetland Hydrology Present? Yes ✔ No ___

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

Antecedent precipitation has been normal during the wet season. The drought index indicates mild wetness.

Remarks:

Wetland hydrology is met with three primary and four secondary indicators present.

VEGETATION – Use scientific names of plants. Sampling Point: T2B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phalaris arundinacea	90	✔	FACW
2. Typha X glauca	20		OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		200 (B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

✔ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

Three hydrophytic vegetation indicators observed.

SOIL

Sampling Point T2B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 4	10YR 2/2	100					Silt Loam	
4 - 12	10YR 2/2	93	7.5YR 4/6	7	C	PL/M	Silt Loam	
12 - 24	10YR 2/2	95	7.5YR 4/6	5	C	M	Sandy Clay 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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators F6 and F8 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring City/County: Town of Vienna, Dane County Sampling Date: 2025-09-07

Applicant/Owner: Excel/Keller State: Wisconsin Sampling Point: T3A

Investigator(s): Chad M Fradette Section, Township, Range: S16 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 2-3

Subregion (LRR or MLRA): L 95 Lat: 43.2508612 Long: -89.4253063 Datum: WGS 84

Soil Map Unit Name: EgA - Elburn silt loam, gravelly substratum, 0 to 3 percent slopes NWI classification: None

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

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

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

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

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

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

Sample plot is in a fallow area between a corn field and a wetland.

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

Wetland Hydrology Present? Yes ____ No ✔

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

Antecedent precipitation has been normal during the wet season. The drought index indicates mild wetness.

Remarks:

No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T3A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Sonchus arvensis	50	✔	FACU
2. Cirsium arvense	20	✔	FACU
3. Phalaris arundinacea	20	✔	FACW
4. Symphyotrichum pilosum	20	✔	FACU
5. Rumex crispus	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	5	x 3 =	15
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	115 (A)		415 (B)

Prevalence Index = B/A = 3.60

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 ✔

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

No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T3A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 2/2	100					Silt Loam	
10 - 18	10YR 2/2	95	7.5YR 4/6	5	C	M	Silt Loam	
18 - 24	7.5YR 4/4	90	7.5YR 4/6	10	C	M	Loamy Sand	gravelly
-								
-								
-								
-								
-								
-								
-								
-								

[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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

No hydric soil indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring City/County: Town of Vienna, Dane County Sampling Date: 2025-09-07
Applicant/Owner: Excel/Keller State: Wisconsin Sampling Point: T3B
Investigator(s): Chad M Fradette Section, Township, Range: S16 T9N R9E
Landform (hillside, terrace, etc.): Closed Depression Local relief (concave, convex, none): Concave Slope %: 0-2
Subregion (LRR or MLRA): L 95 Lat: 43.2506601 Long: -89.4252297 Datum: WGS 84
Soil Map Unit Name: EgA - Elburn silt loam, gravelly substratum, 0 to 3 percent slopes NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

Sample plot is in a shallow cattail marsh. The wetland boundary was set at the point where the F6 hydric soil indicator dropped out in the adjacent corn field. This was approximately where the slope percentage dropped from 2-3% to 1-2%, toeslope. The boundary was probed at regular intervals to make this determination. Flags were not left in the corn to prevent them from entering cattle feed. The boundary was continuously surveyed.

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 ___	Depth (inches): 0-12
Water Table Present?	Yes ___	No ✔	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ___	No ✔	Depth (inches):

Wetland Hydrology Present? Yes ✔ No ___

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

Antecedent precipitation has been normal during the wet season. The drought index indicates mild wetness.

Remarks:

Wetland hydrology is met with four primary and four secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T3B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Lemna minor	60	✔	OBL
2. Typha X glauca	40	✔	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
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:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

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** ___

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

Three hydrophytic vegetation indicators observed.

SOIL

Sampling Point T3B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 2/2	93	5YR 3/4	7	RM	M	Silt Loam	
12 - 18	10YR 4/4	95	7.5YR 4/6	5	C	M	Sandy Clay	
18 - 24	10YR 4/2	95	7.5YR 4/6	5	C	M	Loamy Sand	
-								
-								
-								
-								
-								
-								
-								
-								

[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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators F6 and F8 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T4A

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 1-3

Subregion (LRR or MLRA): L 95 Lat: 43.2465652 Long: -89.4221109 Datum: WGS 84

Soil Map Unit Name: ShA - Salter sandy loam, wet variant, 0 to 3 percent slopes NWI classification: None

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

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

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

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

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

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

Sample plot is in a meadow at the edge of the cropped field.

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

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

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T4A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	1		FAC
2. Rhamnus cathartica	1		FAC
3. Rubus idaeus	1		FAC
4.			
5.			
6.			
7.			
	3	=Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Bromus inermis	80	✔	UPL
2. Phalaris arundinacea	20		FACW
3. Solidago altissima	10		FACU
4. Solanum carolinense	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Smilax herbacea	1		FAC
2.			
3.			
4.			
	1	=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:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	4	x 3 =	12
FACU species	35	x 4 =	140
UPL species	80	x 5 =	400
Column Totals:	139	(A)	592 (B)

Prevalence Index = B/A = 4.25

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 ✔

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

No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T4A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 12	10YR 2/1	100					Silt Loam	
12 - 24	10YR 4/2	98	7.5YR 3/4	2	C	M	Silt	
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicator A12 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T4B

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2

Subregion (LRR or MLRA): L 95 Lat: 43.2465733 Long: -89.4224875 Datum: WGS 84

Soil Map Unit Name: HaA - Hayfield silt loam, 0 to 3 percent slopes NWI classification: PEM1C

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

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

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

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

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

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

Sample plot is in a meadow at the edge of the cropped field. Wetland boundary was marked by a distinct change in vegetation from reed canary grass to brome grass at the field edge. The corresponding elevation was followed around the depression.

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

Wetland Hydrology Present? Yes ✔ No ____

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is met with three secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T4B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phalaris arundinacea	90	✔	FACW
2. Panicum dichotomiflorum	20		FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		220 (B)

Prevalence Index = B/A = 2.00

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** ___

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

Three hydrophytic vegetation indicators observed.

SOIL

Sampling Point T4B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 17	10YR 2/1	100					Silt Loam	
17 - 22	10YR 4/1	97	7.5YR 3/4	3	C	M	Silt Loam	
22 - 28	10YR 4/2	98	7.5YR 3/4	2	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: SiC

Depth (inches): 22

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

Remarks:

Layer 2 and 3 were combined to meet a depleted layer of more than 6 inches. Hydric soil indicator A12 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T5A

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-1

Subregion (LRR or MLRA): L 95 Lat: 43.2470426 Long: -89.4257811 Datum: WGS 84

Soil Map Unit Name: SaA - Sable silty clay loam, 0 to 2 percent slopes NWI classification: Pf

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

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

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

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

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

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

Sample plot is in a shallow marsh, occasionally cropped.

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

Wetland Hydrology Present? Yes ✔ No ____

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is met with two primary and four secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T5A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Alisma subcordatum	60	✔	OBL
2. Schoenoplectus tabernaemontani	20	✔	OBL
3. Ranunculus sceleratus	5		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
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:	85 (A)		85 (B)

Prevalence Index = B/A = 1.00

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** ___

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

Three hydrophytic vegetation indicators observed.

SOIL

Sampling Point T5A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 14	10YR 2/1	100					Silty Clay Loam	
14 - 24	5GY 5/	90	5YR 4/6	10	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicator A12 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T5B

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-1

Subregion (LRR or MLRA): L 95 Lat: 43.2470398 Long: -89.4252119 Datum: WGS 84

Soil Map Unit Name: SaA - Sable silty clay loam, 0 to 2 percent slopes NWI classification: Pf

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

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

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

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

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

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

Sample plot is in a ruderal wet meadow, occasionally cropped.

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

Wetland Hydrology Present? Yes ✔ No ____

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is met with two primary and four secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T5B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phalaris arundinacea	30	✔	FACW
2. Cirsium arvense	20	✔	FACU
3. Panicum dichotomiflorum	20	✔	FACW
4. Rumex crispus	20	✔	FAC
5. Echinochloa crus-galli	10		FAC
6. Erechtites hieraciifolia	10		FACU
7. Ranunculus sceleratus	5		OBL
8.			
9.			
10.			
11.			
12.			
	115 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	50	x 2 =	100
FAC species	30	x 3 =	90
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	115 (A)		315 (B)

Prevalence Index = B/A = 2.73

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 ___

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

Two hydrophytic vegetation indicators observed.

SOIL

Sampling Point T5B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 2/2	95	7.5YR 4/6	5	C	M	Silty Clay Loam	
12 - 16	5GY 5/	90	5YR 4/6	10	C	M	Silty Clay	
16 - 24	10YR 5/1	70	7.5YR 4/6	30	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators A11 and F6 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T5C

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 1-3

Subregion (LRR or MLRA): L 95 Lat: 43.2470373 Long: -89.4247264 Datum: WGS 84

Soil Map Unit Name: Mc - Marshan silt loam NWI classification: None

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

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

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

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

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

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

Sample plot is in a cropped field. Wetland boundary was set by an extensive review of aerial images for wet signatures and checked in the field. The foot slope of the hill aligned well with wet signatures and was followed. Hydric soil was on either side of the boundary but surficial redox was absent above the wetland line in most areas. Soils were probed along the boundary.

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

Wetland Hydrology Present? Yes ____ No ✔

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is not met with only one secondary indicator observed.

VEGETATION – Use scientific names of plants. Sampling Point: T5C

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	1		FAC
2. Rhamnus cathartica	1		FAC
3. Rubus idaeus	1		FAC
4.			
5.			
6.			
7.			
	3	=Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Bromus inermis	80	✔	UPL
2. Phalaris arundinacea	20		FACW
3. Solidago altissima	10		FACU
4. Solanum carolinense	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Smilax herbacea	1		FAC
2.			
3.			
4.			
	1	=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:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	4	x 3 =	12
FACU species	35	x 4 =	140
UPL species	80	x 5 =	400
Column Totals:	139	(A)	592 (B)

Prevalence Index = B/A = 4.25

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 ✔

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

Disturbed vegetation protocol was used, reviewed undisturbed vegetation in a similar landscape position. No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T5C

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 12	10YR 2/2	100					Sandy Loam	
12 - 24	10YR 4/2	95	7.5YR 3/4	5	C	M	Sandy 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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicator A11 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17
Applicant/Owner: Excel State: Wisconsin Sampling Point: T6A
Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-1
Subregion (LRR or MLRA): L 95 Lat: 43.2480201 Long: -89.4242568 Datum: WGS 84
Soil Map Unit Name: Mc - Marshan silt loam NWI classification: Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

Sample plot is in a wet meadow, occasionally cropped. A shallow marsh populated by Alisma subcordatum is immediately west.

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

Wetland Hydrology Present? Yes ✔ No ____

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is met with two primary and five secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T6A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Bidens cernua	30	✔	OBL
2. Echinochloa crus-galli	20	✔	FAC
3. Penthorum sedoides	20	✔	OBL
4. Rumex crispus	20	✔	FAC
5. Panicum dichotomiflorum	10		FACW
6. Ranunculus sceleratus	5		OBL
7.			
8.			
9.			
10.			
11.			
12.			
	105	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	10	x 2 =	20
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		195 (B)

Prevalence Index = B/A = 1.85

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 ___

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

Two hydrophytic vegetation indicators observed.

SOIL

Sampling Point T6A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 6	10YR 2/2	95	7.5YR 3/4	5	C	M	Silt Loam	
6 - 12	10YR 2/1	100					Silt Loam	
12 - 24	10YR 4/1	97	5YR 3/4	3	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators A23 and F6 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T6B

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 1-3

Subregion (LRR or MLRA): L 95 Lat: 43.2480782 Long: -89.4236368 Datum: WGS 84

Soil Map Unit Name: Mc - Marshan silt loam NWI classification: None

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

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

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

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

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

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

Sample plot is in a cropped field. Wetland boundary was set by an extensive review of aerial images for wet signatures and checked in the field. The foot slope of the hill aligned well with wet signatures and was followed. Hydric soil was on either side of the boundary but surficial redox was absent above the wetland line in most areas. Soils were probed along the boundary.

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

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

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology not met with only one secondary indicator observed.

VEGETATION – Use scientific names of plants. Sampling Point: T6B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	1		FAC
2. Rhamnus cathartica	1		FAC
3. Rubus idaeus	1		FAC
4.			
5.			
6.			
7.			
	3	=Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Bromus inermis	80	✔	UPL
2. Phalaris arundinacea	20		FACW
3. Solidago altissima	10		FACU
4. Solanum carolinense	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Smilax herbacea	1		FAC
2.			
3.			
4.			
	1	=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:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	4	x 3 =	12
FACU species	35	x 4 =	140
UPL species	80	x 5 =	400
Column Totals:	139	(A)	592 (B)

Prevalence Index = B/A = 4.25

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 ✔

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

Disturbed vegetation protocol was used, reviewed undisturbed vegetation in a similar landscape position. No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T6B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 10	10YR 2/2	100					Sandy Loam	
10 - 24	10YR 4/2	93	7.5YR 3/4	7	C	M	Sandy 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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators A11 and F3 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17
Applicant/Owner: Excel State: Wisconsin Sampling Point: T7A
Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2
Subregion (LRR or MLRA): L 95 Lat: 43.2492387 Long: -89.4237677 Datum: WGS 84
Soil Map Unit Name: SaA - Sable silty clay loam, 0 to 2 percent slopes NWI classification: Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)
Are Vegetation ✔, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✔
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

Sample plot is in a cropped field, crop was stunted or drowned out.

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

Wetland Hydrology Present? Yes ✔ No ____

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is met with two primary and four secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T7A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Echinochloa crus-galli	80	✔	FAC
2. Panicum dichotomiflorum	30	✔	FACW
3. Erechtites hieraciifolia	5		FACU
4. Rumex crispus	5		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	85	x 3 =	255
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	120 (A)		335 (B)

Prevalence Index = B/A = 2.79

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 ___

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

Field is covered in weeds. Two hydrophytic vegetation indicators observed.

SOIL

Sampling Point T7A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 14	10YR 3/1	93	7.5YR 3/4	7	C	PL/M	Silty Clay Loam	
14 - 24	10YR 5/1	90	7.5YR 4/6	10	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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicator F6 observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T7B

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 1-3

Subregion (LRR or MLRA): L 95 Lat: 43.2489090 Long: -89.4234965 Datum: WGS 84

Soil Map Unit Name: Mc - Marshan silt loam NWI classification: None

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

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

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

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

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

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

Sample plot is in a cropped field. Wetland boundary was set by an extensive review of aerial images for wet signatures and checked in the field. The foot slope of the hill aligned well with wet signatures and was followed. Surficial redox was absent above the wetland line in most areas. Soils were probed along the boundary.

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

Wetland Hydrology Present? Yes ____ No ✔

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is not met with only one secondary indicator observed.

VEGETATION – Use scientific names of plants. Sampling Point: T7B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	1		FAC
2. Rhamnus cathartica	1		FAC
3. Rubus idaeus	1		FAC
4.			
5.			
6.			
7.			
	3	=Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Bromus inermis	80	✔	UPL
2. Phalaris arundinacea	20		FACW
3. Solidago altissima	10		FACU
4. Solanum carolinense	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Smilax herbacea	1		FAC
2.			
3.			
4.			
	1	=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:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	4	x 3 =	12
FACU species	35	x 4 =	140
UPL species	80	x 5 =	400
Column Totals:	139	(A)	592 (B)

Prevalence Index = B/A = 4.25

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 ✔

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

Disturbed vegetation protocol was used, reviewed undisturbed vegetation in a similar landscape position. No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T7B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 12	10YR 2/2	100					Sandy Loam	
12 - 18	10YR 2/2	95	7.5YR 3/4	5	C	M	Sandy Loam	
18 - 24	10YR 4/2	97	7.5YR 3/4	3	C	M	Sandy 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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

No hydric soil indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T8A

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 1-3

Subregion (LRR or MLRA): L 95 Lat: 43.2485490 Long: -89.4222038 Datum: WGS 84

Soil Map Unit Name: HaA - Hayfield silt loam, 0 to 3 percent slopes NWI classification: None

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

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

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

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

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

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

Sample plot is in a cropped field. Wetland boundary was set by an extensive review of aerial images for wet signatures and checked in the field. The foot slope of the hill aligned well with wet signatures and was followed. Surficial redox was absent above the wetland line in most areas. Soils were probed along the boundary.

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

Wetland Hydrology Present? Yes ____ No ✔

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T8A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	1		FAC
2. Rhamnus cathartica	1		FAC
3. Rubus idaeus	1		FAC
4.			
5.			
6.			
7.			
	3	=Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Bromus inermis	80	✔	UPL
2. Phalaris arundinacea	20		FACW
3. Solidago altissima	10		FACU
4. Solanum carolinense	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Smilax herbacea	1		FAC
2.			
3.			
4.			
	1	=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:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	4	x 3 =	12
FACU species	35	x 4 =	140
UPL species	80	x 5 =	400
Column Totals:	139	(A)	592 (B)

Prevalence Index = B/A = 4.25

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 ✔

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

Disturbed vegetation protocol was used, reviewed undisturbed vegetation in a similar landscape position. No hydrophytic vegetation indicators observed.

SOIL

Sampling Point T8A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/2	100					Loamy Sand	
8 - 12	10YR 3/2	95	7.5YR 3/4	5	C	M	Loamy Sand	
12 - 24	10YR 5/3	97	7.5YR 3/4	3	C	M	Loamy Sand	
-								
-								
-								
-								
-								
-								
-								
-								

[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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

No hydric soil indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: DAN25-020-01 Madison Spring South City/County: Town of Vienna, Dane County Sampling Date: 2025-10-17

Applicant/Owner: Excel State: Wisconsin Sampling Point: T8B

Investigator(s): Chad M Fradette Section, Township, Range: S21 T9N R9E

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2

Subregion (LRR or MLRA): L 95 Lat: 43.2486991 Long: -89.4221373 Datum: WGS 84

Soil Map Unit Name: SaA - Sable silty clay loam, 0 to 2 percent slopes NWI classification: Pf

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

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

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

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

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

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

Sample plot is in a cropped field, crop was stunted or drowned out.

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

Wetland Hydrology Present? Yes ✔ No ____

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

Antecedent precipitation has been drier than normal during the wet season. The drought index has indicated mild wetness.

Remarks:

Wetland hydrology is met with one primary and four secondary indicators observed.

VEGETATION – Use scientific names of plants. Sampling Point: T8B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Echinochloa crus-galli	60	✔	FAC
2. Panicum dichotomiflorum	40	✔	FACW
3. Erechtites hieraciifolia	5		FACU
4. Rumex crispus	5		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	65	x 3 =	195
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	110 (A)		295 (B)

Prevalence Index = B/A = 2.68

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 ___

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

Field is covered in weeds. Two hydrophytic vegetation indicators observed.

SOIL

Sampling Point T8B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 14	10YR 2/2	93	7.5YR 3/4	7	C	PL/M	Sandy Loam	
14 - 24	10YR 4/1	90	7.5YR 4/6	10	C	M	Sandy Clay	
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[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)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ 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**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 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**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicator F6 observed.