Winnebago County Planning and Zoning Department

NOTICE OF PUBLIC HEARING
PLANNING AND ZONING COMMITTEE
3/28/2017

TO WHOM IT MAY CONCERN:

The applicant(s) listed below has requested a Zoning Map Amendment which is regulated by the Town/County Zoning Code, Chapter 23. You are receiving this notice because this application or petition for action: 1. affects area in the immediate vicinity of property which you own; 2. requires your agency to be notified; 3. requires your Town to be notified; or 4. requires you, as the applicant, to be notified.

The Winnebago County Planning and Zoning Committee will be holding a public hearing on 3/28/2017 at 6:30 p.m. in Conference Room 408 of the County Administration Building located at 112 Otter Ave, Oshkosh, WI.

All interested persons wishing to be heard at the public hearing are invited to be present. For further detailed information concerning this notice, contact the Town Clerk or the Winnebago County Zoning Office, where the application is available for viewing.

INFORMATION ON ZONING MAP AMENDMENT REQUEST

Application No.:
2017-ZC-4010

Applicant:
BUSER, DANNY
DENU, AMANDA M

Location of Premises:
8966 FAITH RD
LARSEN, WI 54947

Tax Parcel No.:
Pt 028-0449
Pt 028-0450

Legal Description:
Being a part of the S 1/2 of the SW 1/4, Section 10, and also a part of the N 1/2 of the NW 1/4, Section 15, all in Township 20 North, Range 15 East, Town of Winchester, Winnebago County, Wisconsin.

Explanation:
Applicant is requesting a zoning map amendment to R-1 Rural Residential for parts of two parcels.

INITIAL STAFF REPORT

Sanitation:
System Required
Private System

Overlays:
Floodplain
Shoreland
Wetlands

Current Zoning:
A-2 General Agriculture

Proposed Zoning:
R-1 Rural Residential

Surrounding Zoning:
North: A-2
South: A-2
East: R-1
West: A-1

THE FOLLOWING INFORMATION HAS BEEN PROVIDED BY THE OWNER / APPLICANT

Describe Present Use(s):
Agricultural use

Describe Proposed Use(s):
Single Family Residential

Describe The Essential Services For Present And Future Uses:
Sewer (mound) and water will be required.

Describe Why The Proposed Use Would Be The Highest And Best Use For The Property:
Area already has several residential properties.

Describe The Proposed Use(s) Compatibility With Surrounding Land Uses:
Property will be located within several residential properties - homes.

SECTION REFERENCE AND BASIS OF DECISION

23.7-5 Basis of decision

(b) **Zoning map amendment initiated by a property owner**. If a proposed zoning map amendment is initiated by a property owner and would change the zoning classification of a parcel not classified as A-1, the Planning and Zoning Committee in making its recommendation and the Board of County Supervisors in making its decision shall consider the following factors:

(1) whether the amendment is consistent with the county's comprehensive plan, including any future land use maps or similar maps;
(2) the extent to which the lot and structures on the subject property conform to the dimensional standards that apply to the proposed zoning district; and
(3) any other factor not specifically or generally listed, but deemed appropriate by the committee or board given the particular circumstances.

If a proposed zoning map amendment is initiated by a property owner and would change the zoning classification of land classified as A-1, the Planning and Zoning Committee shall only recommend approval and the Board of County Supervisors shall only approve the proposed amendment when all of the following findings can be made:

(1) Such land is better suited for a use not otherwise allowed in the A-1 district.
(2) The amendment is consistent with the county's comprehensive plan.
(3) The amendment is substantially consistent with the county's farmland preservation plan as certified by the Wisconsin Department of Agriculture, Trade and Consumer Protection.
(4) The amendment will not substantially impair or limit current or future agricultural use of other protected farmland in the area.

The special requirements stated above relating to the rezoning of land in a A-1 district do not apply to a map amendment that (1) is certified by the Wisconsin Department of Agriculture, Trade and Consumer Protection under ch. 91, Wis. Stats., or (2) makes the zoning map more consistent with county's farmland preservation plan map, certified under ch. 91, Wis. Stats., which is in effect at the time of the amendment.

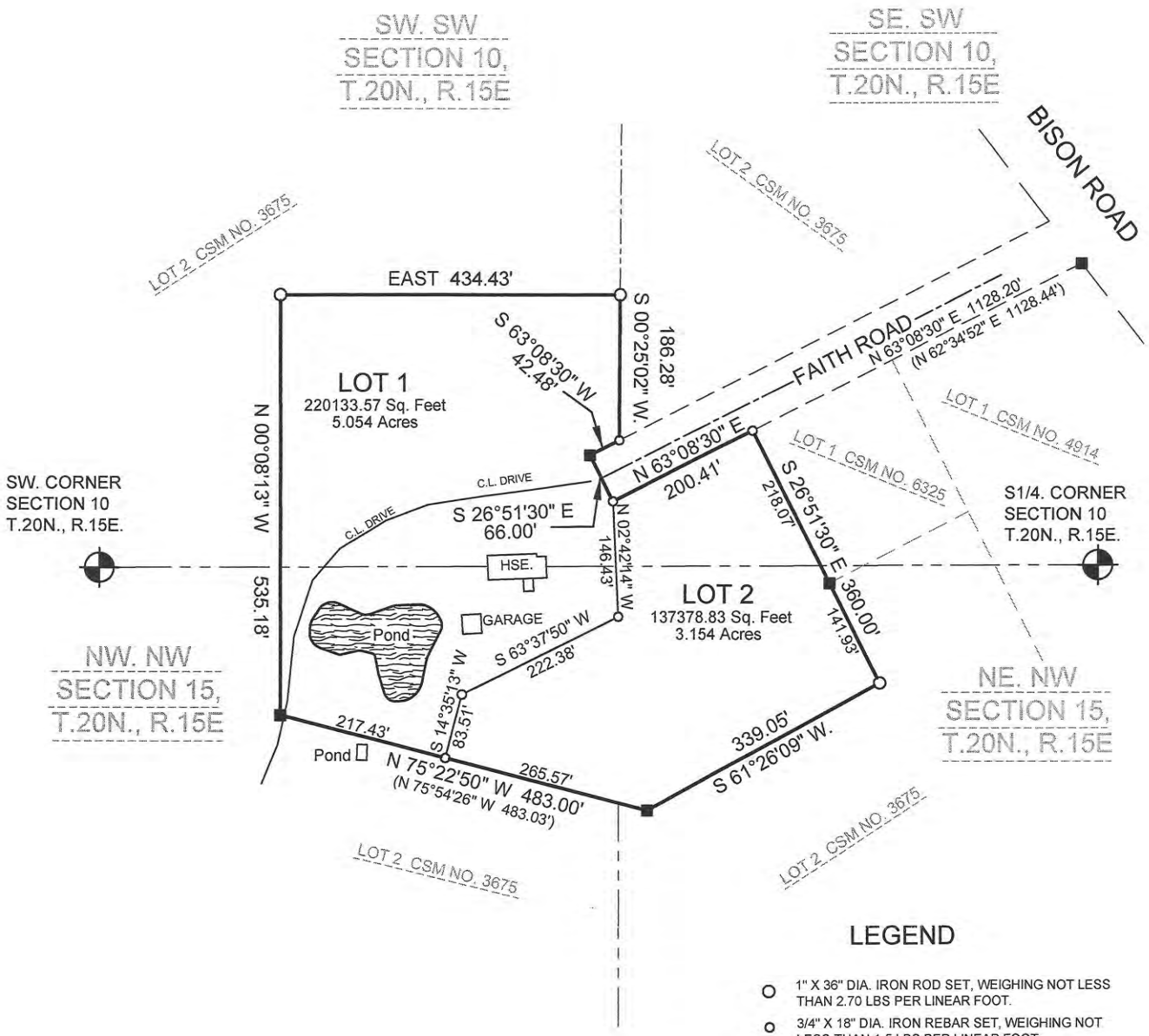
(c) **Zoning map amendment initiated by the county.** If a proposed zoning map amendment is initiated by the county, the Planning and Zoning Committee in making its recommendation and the Board of County Supervisors in making its decision shall consider the following factors:

(1) whether the amendment is consistent with the county's comprehensive plan, including any future land use maps or similar maps;
(2) whether the amendment is consistent with other planning documents adopted by the Board of County Supervisors; and
(3) any other factor not specifically or generally listed, but deemed appropriate by the committee or board given the particular circumstances.

WINNEBAGO COUNTY CERTIFIED SURVEY MAP NO._____

ALL OF LOT 1 AND A PART OF LOT 2 OF CSM NO. 3675 LOCATED IN THE SW.1/4 OF THE SW.1/4 AND THE SE.1/4 OF THE SW.1/4 OF SECTION 10 ALSO LOCATED THE NW.1/4 OF THE NW.1/4 AND THE NE.1/4 OF THE NW.1/4 OF SECTION 15, T.20N., R.15E
TOWN OF WINCHESTER, WINNEBAGO COUNTY, WISCONSIN.

SURVEY FOR: DAN BUSER
8965 FAITH ROAD
LARSEN, WI 54947



LEGEND

- ○ 1" X 36" DIA. IRON ROD SET, WEIGHING NOT LESS THAN 2.70 LBS PER LINEAR FOOT.
- ○ 3/4" X 18" DIA. IRON REBAR SET, WEIGHING NOT LESS THAN 1.5 LBS PER LINEAR FOOT.
- ■ 1" IRON PIPE FOUND
- ⊕ SECTION CORNER

DATED THE _____ DAY OF _____, 2017

_____
WISCONSIN REGISTERED LAND SURVEYOR S-1599
LAWRENCE C. KRIESCHER

L.C.KRIESCHER AND ASSOCIATES LLC
5251 GRANDVIEW ROAD
LARSEN, WI 54947
920-836-3576

BOUNDARY SURVEY
&
LAND DESIGN

PROJECT NO. 2017-01-01
FILE NO. BUSER(2).DWG
NOTEBOOK: 20 PAGE: 68

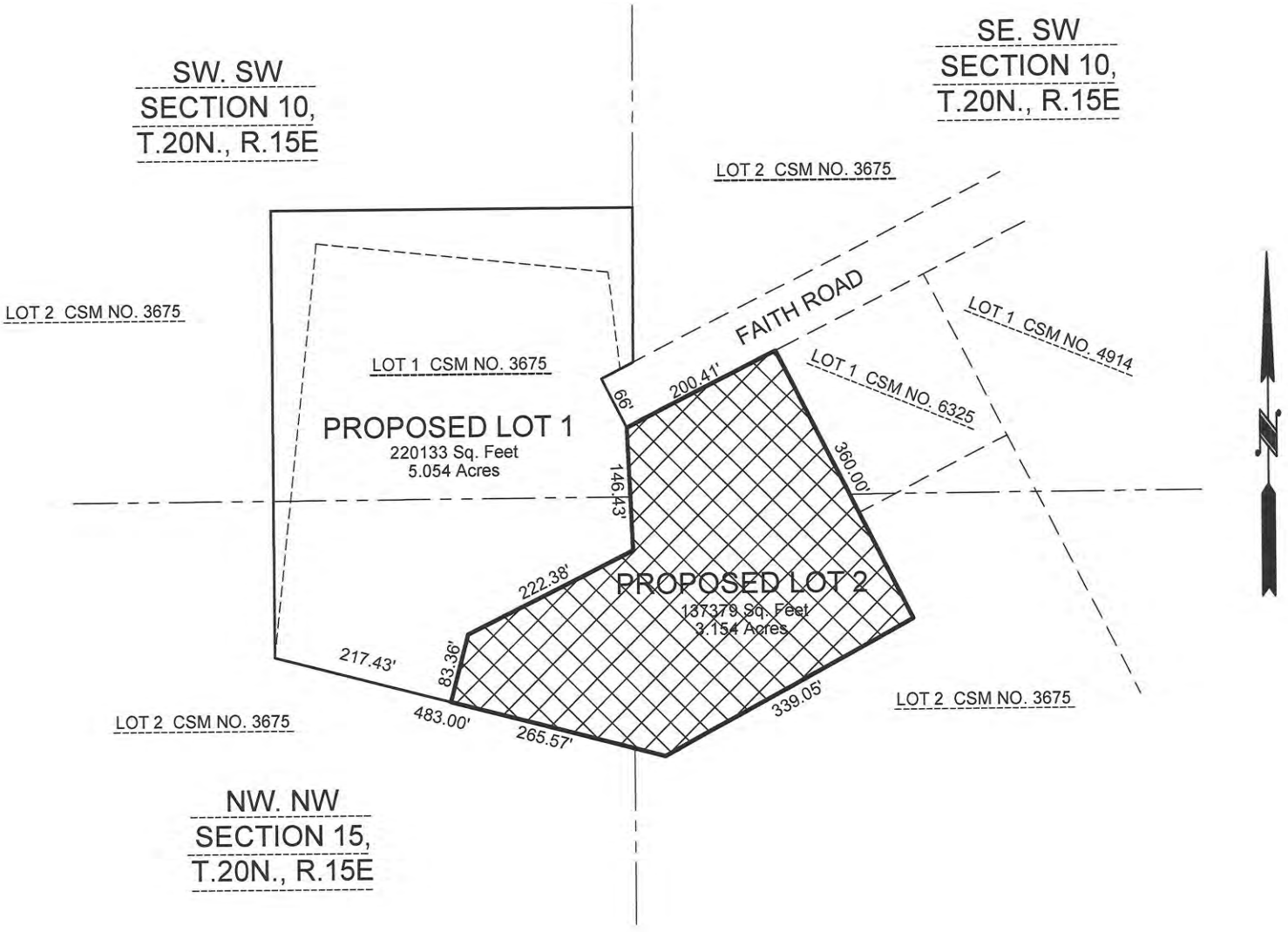
DWG. NO. L- 453

THIS INSTRUMENT DRAFTED BY L.C. KRIESCHER S-1599

EXHIBIT MAP

PROPOSED ZONING CHANGE

ALL OF LOT 1 OF CSM NO. 3675 AND A PART OF LOT 2 OF CSM NO, 3675 LOCATED IN THE SW.1/4 OF THE SW.1/4 AND THE SE.1/4 OF THE SW.1/4 OF SECTION 10 AND LOCATED IN THE NW.1/4 OF THE NW.1/4 AND THE NE.1/4 OF THE NW.1/4 OF SECTION 15, T.20N., R.15E TOWN OF WINCHESTER, WINNEBAGO COUNTY, WISCONSIN.

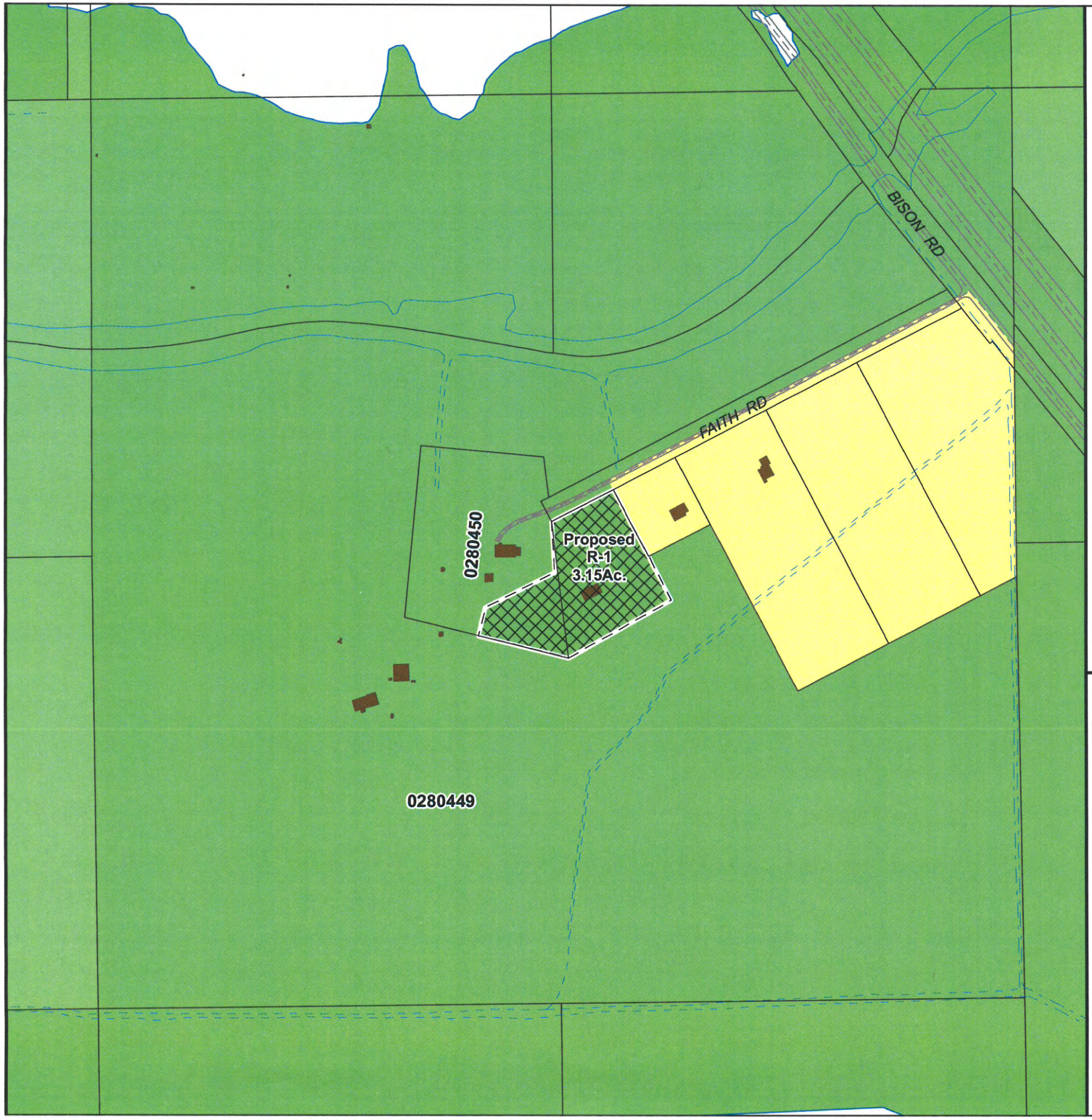


0' 200' 400' 600'

L.C.KRIESCHER AND ASSOCIATES LLC
5251 GRANDVIEW ROAD
LARSEN, WI 54947
920-836-3576

BOUNDARY SURVEY
&
LAND DESIGN

DWG. NO. L- 453-Z



Application #17-ZC-4010

Date of Hearing:

March 28, 2017

Owner(s):

Buser, Dan & Laura /
Denu, Amanda

Subject Parcel(s):

0280449(P) & 0280450(P)

N
W E
S

Winnebago County
WINGS Project

Scale

1 inch : 400 feet

County Zoning Districts

R-1	PDD	B-1
R-2	A-1	B-2
R-3	A-2	B-3
R-4	I-1	M-1
R-8	I-2	Town Zoning

City of Oshkosh Extraterritorial Zoning Jurisdiction

Incorporated Area

= SITE

1 inch : 2,000 feet

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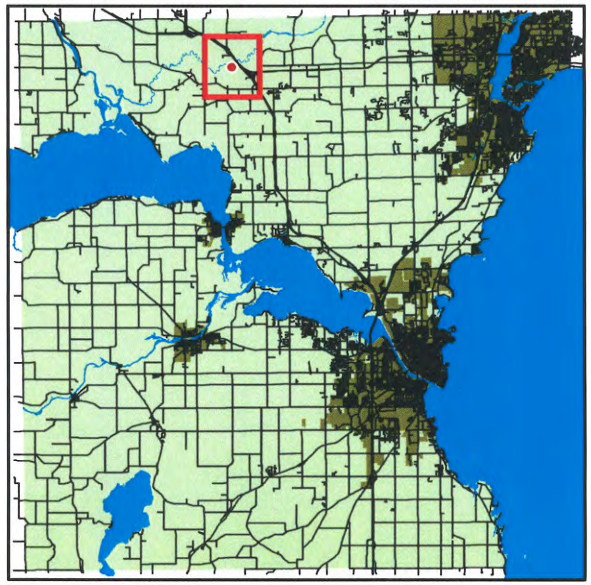
Winnebago County
WINGS Project

= SITE



WINNEBAGO COUNTY

Winnebago County Planning and Zoning Department

NOTICE OF PUBLIC HEARING
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All interested persons wishing to be heard at the public hearing are invited to be present. For further detailed information concerning this notice, contact the Town Clerk or the Winnebago County Zoning Office, where the application is available for viewing.

INFORMATION ON ZONING MAP AMENDMENT REQUEST

Application No.:
2017-ZC-4020

Applicant:
JUDGES POINT LLC

Location of Premises:
COUNTY RD E
RIPON, WI 54971

Tax Parcel No.:
014-053301

Legal Description:
Being a part of Government Lot 3, Section 27, Township 17 North, Range 14 East, Town of Nepeuskun, Winnebago County, Wisconsin.

Explanation:
Applicant is requesting a zoning map amendment to remove a wetland overlay over a portion of a property.

INITIAL STAFF REPORT

Sanitation:
System Required
Private System

Overlays:
Floodplain
Shoreland
Wetlands

Current Zoning:
A-2 General Agriculture, with wetlands

Proposed Zoning:
A-2 General Agriculture, without wetlands

Surrounding Zoning:
North: A-1
South: A-2
East: Water
West: A-1

THE FOLLOWING INFORMATION HAS BEEN PROVIDED BY THE OWNER / APPLICANT

Describe Present Use(s):
Recreational with cabin.

Describe Proposed Use(s):
Use of the property will not change but the cabin needs repairs and we may want to make some alterations to it which could include adding some plumbing infrastructure.

Describe The Essential Services For Present And Future Uses:
Currently no internal plumbing in cabin. Existing sand point well and outhouse on site. If required in future the appropriate plumbing infrastructure will be installed.

Describe Why The Proposed Use Would Be The Highest And Best Use For The Property:
Application is to correct wetland boundaries on DNR wetland map.

Describe The Proposed Use(s) Compatibility With Surrounding Land Uses:
Neighboring properties are also residential/recreational.

SECTION REFERENCE AND BASIS OF DECISION

23.7-5 Basis of decision

(b) **Zoning map amendment initiated by a property owner**. If a proposed zoning map amendment is initiated by a property owner and would change the zoning classification of a parcel not classified as A-1, the Planning and Zoning Committee in making its recommendation and the Board of County Supervisors in making its decision shall consider the following factors:

(1) whether the amendment is consistent with the county's comprehensive plan, including any future land use maps or similar maps;
(2) the extent to which the lot and structures on the subject property conform to the dimensional standards that apply to the proposed zoning district; and
(3) any other factor not specifically or generally listed, but deemed appropriate by the committee or board given the particular circumstances.

If a proposed zoning map amendment is initiated by a property owner and would change the zoning classification of land classified as A-1, the Planning and Zoning Committee shall only recommend approval and the Board of County Supervisors shall only approve the proposed amendment when all of the following findings can be made:

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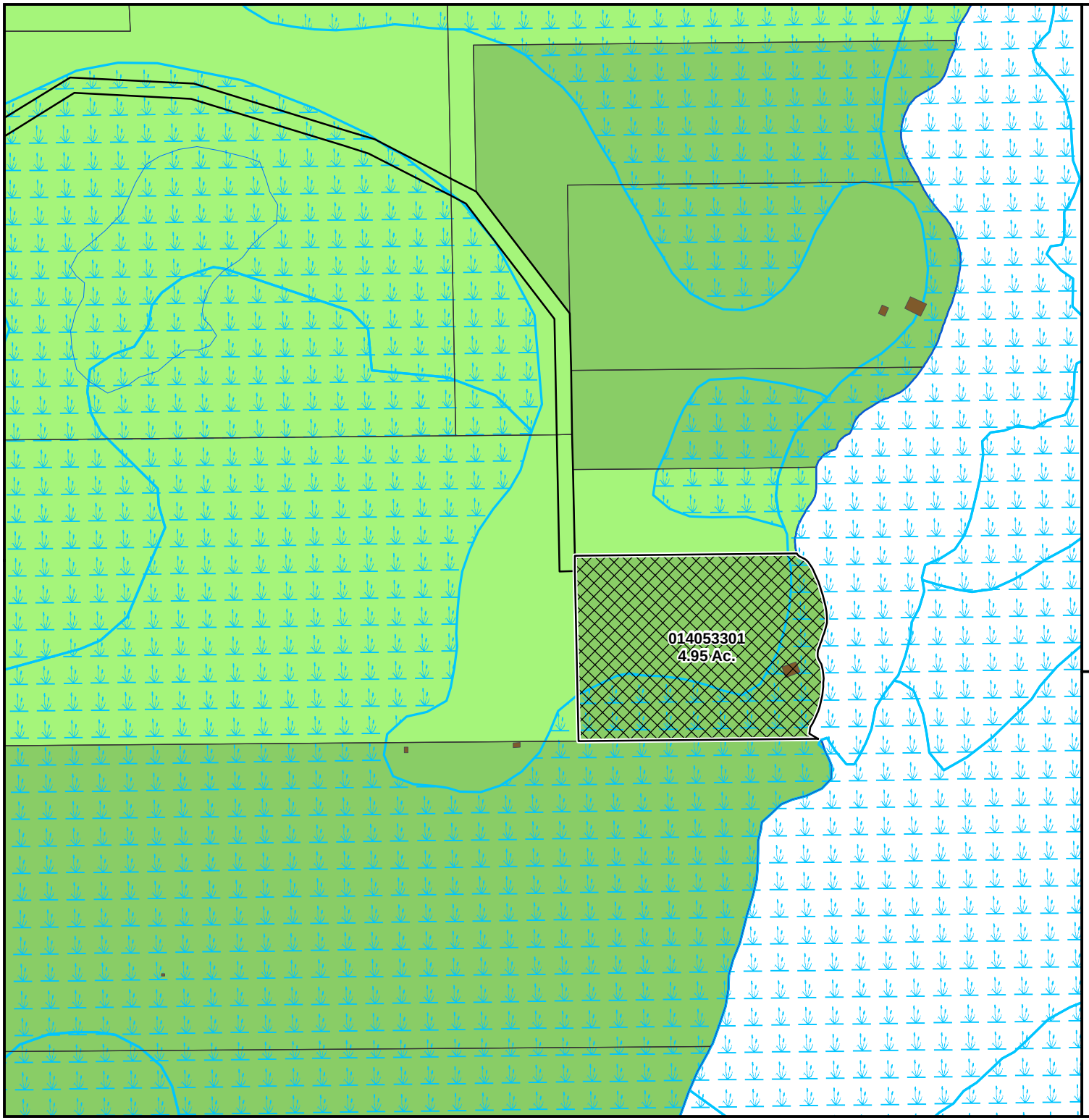

Application #17-ZC-4020

Date of Hearing:
March 28, 2017

Owner(s):
Judges Point, LLC

Subject Parcel(s):
014053301

N
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Winnebago County
WINGS Project

Scale
1 inch : 300 feet

County Zoning Districts

R-1	PDD	B-1
R-2	A-1	B-2
R-3	A-2	B-3
R-4	I-1	M-1
R-8	I-2	Town Zoning

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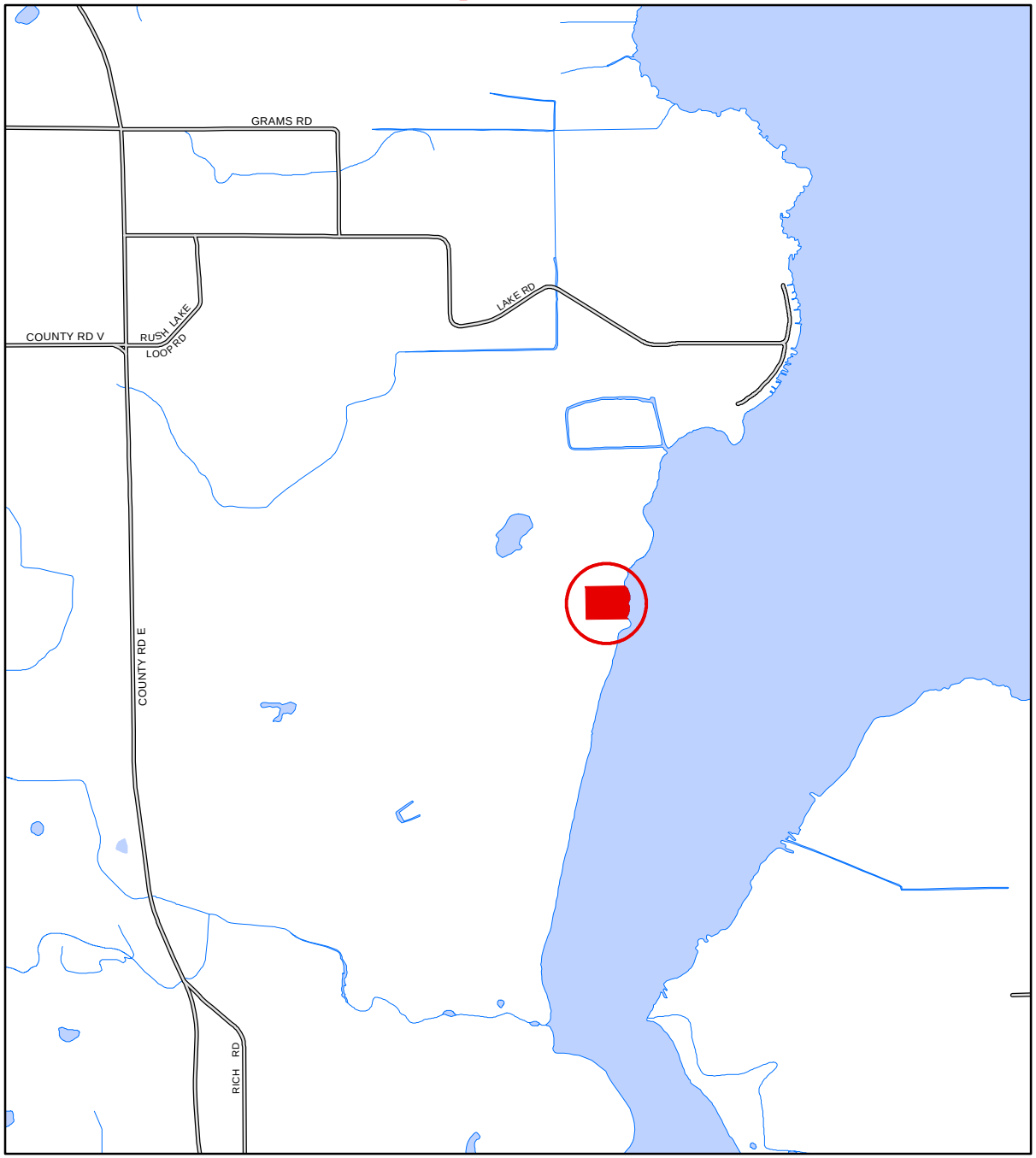
Incorporated Area

= SITE



1 inch : 2,000 feet

Application #17-ZC-4020

Date of Hearing:

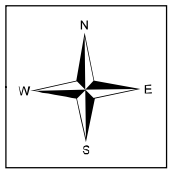
March 28, 2017

Owner(s):

Judges Point, LLC

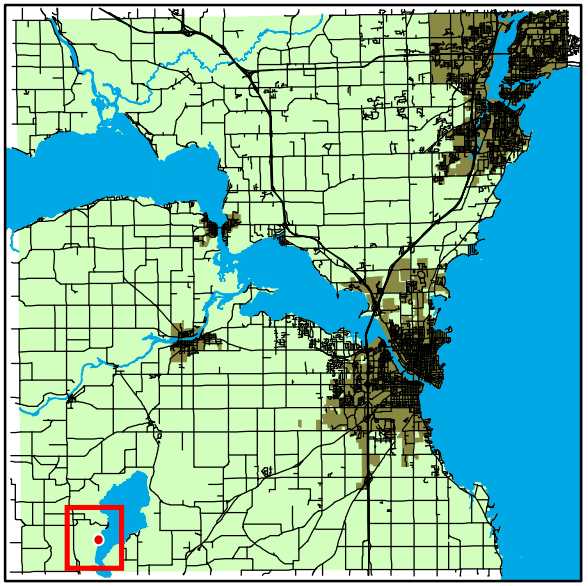
Subject Parcel(s):

014053301



Winnebago County
WINGS Project

= SITE



WINNEBAGO COUNTY

Wetland Delineation Report

Hahn Property
Town of Nepeuskun | Winnebago County, Wisconsin

Prepared For

DAVE HAHN

DECEMBER 13, 2016
McM. No. H1043-9-16-00878.00

TABLE OF CONTENTS

McMAHON ENGINEERS ARCHITECTS

Wetland Delineation Report

Hahn Property
Town of Nepeuskun | Winnebago County, Wisconsin

Prepared For

DAVE HAHN

DECEMBER 13, 2016
McM. No. H1043-9-16-00878.00

I. INTRODUCTION

The project objective was to delineate wetlands located within the project area located on the western shore of Rush Lake off of an easement driveway accessed from CTH 'E'. The site is approximately 4.80 acres located in Section Twenty-Seven (27), Township Seventeen (17) North, Range Fourteen (14) East, Town of Nepeuskun, Winnebago County, Wisconsin. The location of the project and regional topography is shown on Figure 1. The contact person and address for this project is provided below:

Dave Hahn
N6919 Wilderness Way
Sussex, WI 53089

Phone: 262-527-8513
Email: mercrestor@hotmail.com

The wetland delineation was completed by Garek Holley, Environmental Scientist of McMAHON, on October 28, 2016. Mr. Holley has completed 38 hours of wetland delineation training that was sponsored by various regulatory agencies, including the Wisconsin Department of Natural Resources (DNR) and U.S. Army Corps of Engineers.

This report consists of a description of the methods used, results, conclusions and supporting documentation.

II. METHODS

The Winnebago County Soil Survey Map and Wisconsin DNR Wetland Inventory Map are shown on Figure 2. The wetland and project area are shown on Figure 3.

The wetland delineation was performed using the routine determination method in the Corps of Engineers Wetland Delineation Manual, 1987 and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, January, 2012. Furthermore, the resource, "Field Indicators of Hydric Soils in the United States, Guide for Identifying and Delineating Hydric Soils", Version 7.0, 2010, and the Version 7.0, 2015 Errata was also used for determining whether the soils were hydric. The report was prepared in accordance with document titled "Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and the Wisconsin Department of Natural Resources", March 4, 2015.

Percent cover was used to measure dominant species of vegetation. The sampling plots were a 5 feet radius for herbaceous plants, 15 feet for shrubs and saplings which measure less than 3.5 inches DBH, and 30 feet for trees and woody vines. The "50/20 Rule" was used to determine the dominant species for each stratum.

Soil pits were completed in the field using a 16-inch spade shovel and a hand auger to a minimum depth of 20 inches, unless refusal was encountered. Test pits were left open to observe hydrologic conditions and later backfilled when activities were completed.

The wetland boundary was delineated based upon changes in vegetation, soil, hydrology, topography and professional judgment. The following documents were reviewed to aid in characterizing the vegetation, soil and hydrology of the project area prior to field delineation activities.

- Winnebago County Soil Survey
- 7.5 Minute Series Topographic Map
- Wisconsin Wetland Inventory Map
- USDA Field Office Climate Data

A total of five transects were completed to delineate wetlands within the project area. A total of nineteen sampling points were documented using COE Wetland Determination Forms. Copies of the forms are presented in Appendix A. The wetland boundaries and test pits were marked with labeled pin flags. Each pin flag was subsequently located with a Global Positioning System (GPS) capable of sub-foot accuracy. The points were then mapped using Geographic Information System (GIS) software to produce a wetland delineation map.

III. RESULTS & DISCUSSION

The project objective was to delineate wetlands located within on Hahn Property. The project area is 4.80 acres. Photographs of the wetlands are presented in Appendix B. The photos were taken on December 5, 2016; approximately a month and a half after field work was completed. Five wetlands, a total of 1.92 acres were delineated.

A USDA Wetness Evaluation Table was used to determine antecedent precipitation. This USDA climate data provides a range of normal precipitation for each month. The actual monthly precipitation is compared with this range to determine wetness conditions at the time of the wetland delineation. The Oshkosh WETS station received 2.55-inches of precipitation in October, indicating normal conditions. In September, 6.58-inches of precipitation were recorded, indicating wetter than normal conditions. In the month of August the station received 2.44-inches, indicating drier than normal conditions. Based on this data, the period prior to the field work was normal.

Figure 2 shows the Wisconsin Wetland Inventory Map for the project area. Wetlands are mapped within a majority of the project area, except for the western quarter. Rush Lake is located just east of the project area. Figure 2 also shows the Winnebago County Soil Survey Map. Soil Resource & Hydric Soil Reports are presented in Appendix C. The Soil Survey Map shows three different soil map units in the project area. The map units are listed below:

- Fox Silt Loam, 2 to 6% Slopes (FsB) – This soil is well drained. The map unit hydric category is nonhydric. It is not included on the County Hydric Soil List.

- Houghton Muck, Ponded, 0 to 2% Slopes (HW) – This soil is very poorly drained. The map unit hydric category is hydric; the cumulative percentage of components that meet the criteria for hydric soils is 100%. The component soil is included on the County Hydric Soil List.

- Ossian Silt Loam (Os) – This soil is poorly drained. The map unit hydric category is hydric; the cumulative percentage of components that meet the criteria for hydric soils is 100%. The component soil is included on the County Hydric Soil List.

Wetland #1 (0.20 acres), is a wooded swale extending from an emergent wetland. The wetland is surrounded by relatively significant contour breaks which help define the boundary. Indicators of hydrology found within Wetland 1 included Geomorphic Position (D2), FAC Neutral Test (D5), and Saturation (A3) in the northern section of the wetland. Soils consisted of a Depleted Matrix (F3) in the northern section and Thick Dark Surface (A12) up-gradient to the south. Vegetation within the wetland included *Populus tremuloides* and *Fraxinus pennsylvanica* in the tree layer and *Rhamnus cathartica* in the shrub and herbaceous layer. *Phalaris arundinacea* and *Pilea pumila* are found to the north near a clearing on the border of the project area. Defining the wetland extent was done in large part using the tree canopy and hydrology.

A profound break from wetland area was observed where vegetation transitioned to *Quercus spp., Carya ovata, Prunus serotina*, and *Anemone quinquefolia*.

Wetland #2 (188 ft^2) is a small extension of a wet meadow north of the project area. Observed hydrology indicators included Geomorphic Position (D3) and FAC Neutral Test (D5). Vegetation included *Fraxinus pennsylvanica, Rhamnus cathartica*, and *Phalaris arundinacea*.

Wetland #3 (241 ft^2) is a depression in a topographically low wooded area. Like Wetland 1, Wetland 3 is defined by a steep contour break in addition to the tree and herbaceous vegetation. Hydrology indicators in the wetland included Dry-Season Water Table (C2), Geomorphic Position (D3), and the FAC Neutral Test (D5). Soils consisted of a thick dark surface described as a 20 inch A horizon, followed by a depleted B horizon. Vegetation within the wetland included *Fraxinus pennsylvanica* and *Rhamnus cathartica*. Adjacent upland species included *Quercus macrocarpa, Anemone quinquefolia, Prunus serotina*, and *Carya ovata*.

Wetland #4 (0.20 acres) is an emergent/wet meadow wetland located on the shore of Rush Lake. The wetland extends along the entire eastern shore of the property. A significant topographic break and hydrophytic vegetation were used to denote the boundary. Vegetation was primarily comprised of *Phalaris arundinacea* and *Typha angustifolia.*

Wetland #5 (1.51 acres) is an emergent/wet meadow wetland located on the shore of Rush Lake. The wetland extends along the entire southern shore of the property. A significant topographic break and hydrophytic vegetation were used to denote the boundary. Vegetation was primarily comprised of *Phalaris arundinacea* and *Typha angustifolia.* Soils, like much of the rest of the property, met the Thick Dark Surface (A12) hydric soil indicator.

The uplands within the project area consisted largely of a mature Oak/Hickory tree stand, with buckthorn in a majority of the understory. Since trees are good indicators of historic hydrology, it can be deduced that areas which are comprised primarily of Oak, Hickory, and Cherry are not susceptible to seasonal wetland conditions. Furthermore, in some upland areas, wetland criteria for vegetation and soils are met, however, the vegetation is skewed by the presence of buckthorn. Since buckthorn was established in the herbaceous layer and shrub layer, these pits automatically passed the Dominance Test despite the limited diversity and presence of upland trees. Thus, wetlands were primarily mapped by the presence hydrology indicators, and hydrophytic trees.

IV. CONCLUSIONS

McMAHON completed a wetland delineation on Hahn Property. Five wetlands, a total of 1.92 acres were mapped within the 4.80 acre project area. The final authorities for the wetland area are the appropriate State and Federal authorities.

V. LITERATURE CITED

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W:\PROJECTS\H1043\9160087\GIS\WetlandFig1.mxd

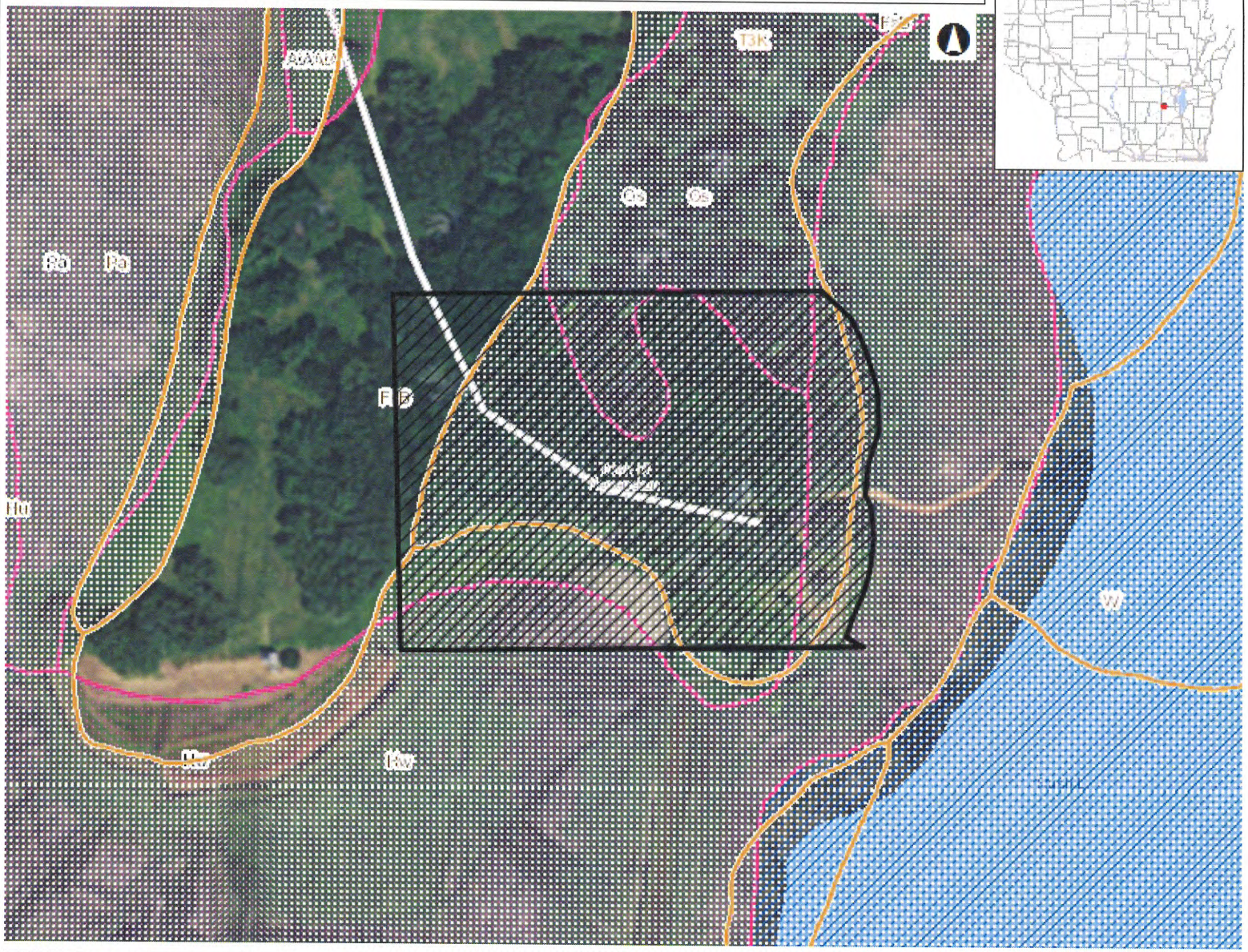
1 inch = 2,000 feet

McMAHON ENGINEERS ARCHITECTS

FIGURE 1
SITE LOCATION & TOPOGRAPHIC MAP
DAVE HAHN PROPERTY
TOWN OF NEPEUSKUN
WINNEBAGO COUNTY, WI

H1043-9-16-00878.00 OCTOBER, 2016

Figure 2: Winnebago County Soil Survey & Wetland Inventory



Legend

- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled excavated pond
  - Filled/drained wetland
  - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
  - Wetland
  - Upland
- Filled Areas
- NRCS Wetspots
- Wetland Indicators
- NRCS Wisconsin Soils
  - Soil Mapping Unit
  - Water
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Major Roads
  - County Road
  - Interstate HWY
  - State HWY
  - US HWY

0.1 0 0.03 0.1 Miles

NAD_1983_HARN_Wisconsin_TM

1: 1,980

Notes

Figure 2: Winnebago County Soil Survey & WDNR Wetland Inventory, Dave Hahn Property, Town of Nepeuskun, Winnebago County, WI

Wetland 1
0.20 acres

Wetland 2
188 square feet

Wetland 3
241 square feet

Wetland 5
1.51 acres

STATE OF WISCONSIN

JUDGES POINT LLC

RUSH LAKE SPTSMENS CLUB

Mapped Features

- Review Area (4.80 acres)
- Wetland Area (1.92 acres)
- McA — Wetland Indicator Soil
- WDNR Wetland Inventory
- Parcel Boundary
- 2ft Contours
- ? — Wetlands Extend Beyond Review Area

Source: Winnebago County, 2010-14.

0 50 100 Feet

McMAHON ENGINEERS ARCHITECTS

FIGURE 3
WETLAND DELINEATION MAP
DAVE HAHN PROPERTY
TOWN OF NEPEUSKUN
WINNEBAGO COUNTY

W:\PROJECTS\M0018\640151\Wetland Delineation\GIS\WetlandFig3.mxd 4/21/2015 slh

APPENDIX A

COE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T1P1
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): concave
Slope (%): 0-1 Lat.: Long.: Datum:
Soil Map Unit Name: FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X, soil , or hydrology significantly disturbed? Are "normal
Are vegetation , soil , or hydrology naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

Mowed Lawn

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):
Water table present?	Yes	X	No		Depth (inches): 7
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches): 0

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T1P1

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 2/1	100					SL	
12-20	2.5Y 7/1	60	5Y 8/1	20	D	M	LS	
			7.5YR 5/6	20	C	M		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T1P1

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Fraxinus pennsylvanica*	10	Y	FACW
2	*Populus tremuloides*	5	Y	FAC
3				
4				
5				
6				
7				
8				
9				
10				
		15	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Phalaris arundinacea*	50	Y	FACW
2	*Agrostis gigantea*	30	Y	FACW
3	*Poa pratensis*	10	N	FACU
4	*Trifolium repens*	10	N	FACU
5	*Taraxacum officinale*	5	N	FACU
6	*Potentilla simplex*	5	N	FACU
7				
8				
9				
10				
11				
12				
13				
14				
15				
		110	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	3	8
Sapling/Shrub Stratum	0	0
Herb Stratum	22	55
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	5	x 3 =	15
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column totals	125 (A)		315 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

X Dominance test is >50%

X Prevalence index is ≤3.0*

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

___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T1P2
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Footslope-upgradient W of T1P1 Local relief (concave, convex, none): concave
Slope (%): 0-2 Lat.: Long.: Datum:
Soil Map Unit Name: FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X, soil , or hydrology significantly disturbed? Are "normal
Are vegetation , soil , or hydrology naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

Mowed Lawn

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):
Water table present?	Yes	X	No		Depth (inches): 10
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches): 2

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T1P2

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	10YR 2/1	100					SIL	
11-20	2.5Y 7/1	60	5Y 8/1	20	D	M	C	
			7.5YR 5/6	20	C	M		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T1P2

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Fraxinus pennsylvanica*	10	Y	FACW
2	*Populus tremuloides*	5	Y	FAC
3				
4				
5				
6				
7				
8				
9				
10				
		15	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Phalaris arundinacea*	40	Y	FACW
2	*Agrostis gigantea*	30	Y	FACW
3	*Poa pratensis*	25	Y	FACU
4	*Taraxacum officinale*	10	N	FACU
5	*Trifolium repens*	5	N	FACU
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		110	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	3	8
Sapling/Shrub Stratum	0	0
Herb Stratum	22	55
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	5	x 3 =	15
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column totals	125 (A)		335 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T1P3
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope-upgradient N of T1P2 Local relief (concave, convex, none): none
Slope (%): 6 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):	
Water table present?	Yes ____	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Approximately 2ft upgradient of T1P2

SOIL **Sampling Point:** T1P3

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-10	10YR 2/1	100					SIL	Rock at 10"

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T1P3

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Quercus alba*	30	Y	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
		30	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Poa pratensis*	60	Y	FACU
2	*Phalaris arundinacea*	40	Y	FACW
3	*Solidago canadensis*	10	N	FACU
4	*Fraxinus pennsylvanica*	5	N	FACW
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		115	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	6	15
Sapling/Shrub Stratum	0	0
Herb Stratum	23	58
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column totals	145 (A)		490 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T1P4
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope-upgradient N of T1P1 Local relief (concave, convex, none): none
Slope (%): 4 Lat.: Long.: Datum:
Soil Map Unit Nam Hw NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X , soil , or hydrology significantly disturbed? Are "normal
Are vegetation , soil , or hydrology naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	Y		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

Mowed lawn

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ___	No X	Depth (inches):	
Water table present?	Yes ___	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ___	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Approximately 1ft upgradient of T1P1

SOIL

Sampling Point: T1P4

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-13	10YR 2/1	100					LS	
13-20	2.5Y 6/2	85	7.5YR 5/6	15	C	M	LS	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T1P4

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

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Poa pratensis*	50	Y	FACU
2	*Agrostis gigantea*	35	Y	FACW
3	*Phalaris arundinacea*	10	N	FACW
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		95	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	19	48
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across 2 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column totals	95 (A)		290 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T2P1
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): convex
Slope (%): 6 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
___ FAC-Neutral Test (D5)
___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):	
Water table present?	Yes ____	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T2P1

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10YR 2/1	100					LS	
8-16	10YR 2/1	100					GRS	Rock at 16"

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T2P1

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Quercus macrocarpa*	50	Y	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
		50	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	60	Y	FAC
2	*Phalaris arundinacea*	20	N	FACW
3	*Poa pratensis*	20	N	FACU
4	*Agrostis gigantea*	10	N	FACW
5	*Fraxinus pennsylvanica*	5	N	FACW
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		115	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	10	25
Sapling/Shrub Stratum	0	0
Herb Stratum	23	58
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across 2 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	60	x 3 =	180
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column totals	165 (A)		530 (B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T2P2
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Footslope-downgradient S of T2P1 Local relief (concave, convex, none): concave
Slope (%): 2 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	____	No X	Depth (inches):	____
Water table present?	Yes	X	No ____	Depth (inches):	14
Saturation present? (includes capillary fringe)	Yes	X	No ____	Depth (inches):	8

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Approximately 2 ft downgradient of T2P1

SOIL **Sampling Point:** T2P2

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR 2/1	100					LS	
14-20	2.5Y 6/1	90					S	
	10YR 3/1	10						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? __Y__

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T2P2

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Fraxinus pennsylvanica*	10	Y	FACW
2	*Populus deltoides*	5	Y	FAC
3				
4				
5				
6				
7				
8				
9				
10				
		15	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	40	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		40	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Phalaris arundinacea*	60	Y	FACW
2	*Rhamnus cathartica*	50	Y	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		110	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	3	8
Sapling/Shrub Stratum	8	20
Herb Stratum	22	55
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across 5 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	95	x 3 =	285
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	165 (A)		425 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

X Dominance test is >50%

X Prevalence index is ≤3.0*

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

___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T3P1
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave
Slope (%): 0-1 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

Rapid Test

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	X	No ____	Depth (inches):	0.5
Water table present?	Yes	X	No ____	Depth (inches):	0
Saturation present? (includes capillary fringe)	Yes	X	No ____	Depth (inches):	0

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T3P1

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:
Rapid Test

VEGETATION - Use scientific names of plants

Sampling Point: T3P1

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

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Phalaris arundinacea*	100	Y	FACW
2	*Typha angustifolia*	5	N	OBL
3	*Carex lacustris*	5	N	OBL
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		110	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

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

Dominance Test Worksheet

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

Total Number of Dominant Species Across 1 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	10	x 1 =	10	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	110 (A)		210	(B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

- X Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T3P2
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope-upgradient N of T3P1 Local relief (concave, convex, none): none
Slope (%): 3 Lat.: Long.: Datum:
Soil Map Unit Name: FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):	
Water table present?	Yes ____	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T3P2

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-10	10YR 2/1	100					LS	
10-19	10YR 2/1	100					GRLS	Rock at 19"

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T3P2

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Quercus alba*	50	Y	FACU
2	*Quercus rubra*	20	Y	FACU
3	*Carya ovata*	10	N	FACU
4				
5				
6				
7				
8				
9				
10				
		80	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	40	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		40	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	70	Y	FAC
2	*Phalaris arundinacea*	10	N	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		80	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	16	40
Sapling/Shrub Stratum	8	20
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across: 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	110	x 3 =	330
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column totals	200 (A)		670 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T4P1
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): none
Slope (%): 4 Lat.: Long.: Datum:
Soil Map Unit Name: Os NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	Y		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):	
Water table present?	Yes ____	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T4P1

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR 2/1	100					SIL	
14-24	2.5Y 6/2	90	7.5YR 5/6	10	C	M	SCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T4P1

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	25	Y	FAC
2	*Quercus alba*	15	Y	FACU
3	*Fraxinus pennsylvanica*	10	Y	FACW
4				
5				
6				
7				
8				
9				
10				
		50	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	30	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		30	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	60	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		60	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	10	25
Sapling/Shrub Stratum	6	15
Herb Stratum	12	30
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	115	x 3 =	345
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	140 (A)		425 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

_X_ Dominance test is >50%

___ Prevalence index is ≤3.0*

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

___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T4P2
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave
Slope (%): 1 Lat.: Long.: Datum:
Soil Map Unit Name Os NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):		
Water table present?	Yes X	No ____	Depth (inches):	20	
Saturation present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	11	

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T4P2

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-9	10YR 2/1	100					LS	OM
9-25	2.5Y 6/2	65	7.5YR 6/6	35	C	M	LS	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T4P2

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Fraxinus pennsylvanica*	15	Y	FACW
2	*Rhamnus cathartica*	10	Y	FAC
3				
4				
5				
6				
7				
8				
9				
10				
		25	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	40	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		40	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Pilea pumila*	30	Y	FACW
2	*Rhamnus cathartica*	25	Y	FAC
3	*Phalaris arundinacea*	10	N	FACW
4	*Solidago gigantea*	5	N	FACW
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		70	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	5	13
Sapling/Shrub Stratum	8	20
Herb Stratum	14	35
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across: 5 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	75	x 3 =	225
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	135 (A)		345 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T4P3
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Shoulder-upgradient E of T4P2 Local relief (concave, convex, none): convex
Slope (%): 4 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):	
Water table present?	Yes ____	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T4P3

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-9	10YR 2/1	100					LS	Rock at 9"

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T4P3

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Quercus macrocarpa*	20	Y	FACU
2	*Prunus serotina*	10	Y	FACU
3	*Rhamnus cathartica*	10	Y	FAC
4	*Quercus alba*	5	N	FACU
5				
6				
7				
8				
9				
10				
		45	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	30	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		30	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	50	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		50	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	9	23
Sapling/Shrub Stratum	6	15
Herb Stratum	10	25
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 60.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column totals	125 (A)		410 (B)

Prevalence Index = B/A = 3.28

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

_X_ Dominance test is >50%

___ Prevalence index is ≤3.0*

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

___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T4P4
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope-S of wetland 1 Local relief (concave, convex, none): none
Slope (%): 3 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches):	
Water table present?	Yes ____	No X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T4P4

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-15	7.5YR 3/1	100						
15-24	2.5Y 6/2	80						
	7.5YR 3/1	20						

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T4P4

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Prunus serotina*	20	Y	FACU
2	*Quercus alba*	10	Y	FACU
3	*Rhamnus cathartica*	10	Y	FAC
4	*Carya ovata*	5	N	FACU
5	*Quercus macrocarpa*	5	N	FACU
6				
7				
8				
9				
10				
		50	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	80	Y	FAC
2	*Phalaris arundinacea*	15	N	FACW
3	*Asclepias syriaca*	10	N	UPL
4	*Carex vulpinoidea*	10	N	OBL
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		115	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	10	25
Sapling/Shrub Stratum	0	0
Herb Stratum	23	58
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	10	x 1 =	10
FACW species	15	x 2 =	30
FAC species	90	x 3 =	270
FACU species	40	x 4 =	160
UPL species	10	x 5 =	50
Column totals	165 (A)		520 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T4P5
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Toeslope-SE of T4P2 Local relief (concave, convex, none): concave
Slope (%): 0-1 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches):	
Water table present?	Yes ____	No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes X	No	____	Depth (inches):	18

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T4P5

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-10	10YR 2/1	100					SIL	
10-14	2.5Y 6/2	85	7.5YR 6/6	15	C	M	SCL	
14-24	5Y 7/2	60	7.5YR 5/6	40	C	M	LS	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? _Y_

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T4P5

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	15	Y	FAC
2	*Fraxinus pennsylvanica*	10	Y	FACW
3				
4				
5				
6				
7				
8				
9				
10				
		25	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	30	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		30	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	20	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		20	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	5	13
Sapling/Shrub Stratum	6	15
Herb Stratum	4	10
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	65	x 3 =	195
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	75 (A)		215 (B)

Prevalence Index = B/A = 2.87

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T4P6
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope-upgradient SW of T4P5 Local relief (concave, convex, none): none
Slope (%): 5 Lat.: Long.: Datum:
Soil Map Unit Nam FsB NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches):	____
Water table present?	Yes ____	No	X	Depth (inches):	____
Saturation present? (includes capillary fringe)	Yes ____	No	X	Depth (inches):	____

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T4P6

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10YR 2/1	100					SL	
8-15	10YR 4/2	100					SCL	
15-22	5Y 7/1	75	7.5YR 5/6	25	C	M	LS	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T4P6

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Carya ovata*	30	Y	FACU
2	*Rhamnus cathartica*	15	Y	FAC
3	*Prunus serotina*	10	N	FACU
4	*Quercus macrocarpa*	10	N	FACU
5				
6				
7				
8				
9				
10				
		65	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	80	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		80	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	13	33
Sapling/Shrub Stratum	0	0
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column totals	145 (A)		485 (B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
_X_ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T5P1
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): none
Slope (%): 15 Lat.: Long.: Datum:
Soil Map Unit Nam Os NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches):	____
Water table present?	Yes ____	No	X	Depth (inches):	____
Saturation present? (includes capillary fringe)	Yes ____	No	X	Depth (inches):	____

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T5P1

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-10	10YR 2/1	100					SL	Rock at 10"

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___N___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T5P1

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	25	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		25	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	10	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		10	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	15	Y	FAC
2	*Hydrophyllum virginianum*	5	Y	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		20	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	5	13
Sapling/Shrub Stratum	2	5
Herb Stratum	4	10
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across: 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	55 (A)		165 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T5P2
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Footslope-downgradient W of T5P1 Local relief (concave, convex, none): concave
Slope (%): 2 Lat.: Long.: Datum:
Soil Map Unit Name Os NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes	____	No	X	Depth (inches): ____
Water table present?	Yes	X	No	____	Depth (inches): 20
Saturation present? (includes capillary fringe)	Yes	X	No	____	Depth (inches): 20

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T5P2

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	10YR 2/1	100					LS	
20-26	2.5Y 6/2	75	7.5YR 5/6	25	C	M	LS	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T5P2

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Fraxinus pennsylvanica*	20	Y	FACW
2	*Tilia americana*	10	Y	FACU
3	*Rhamnus cathartica*	10	Y	FAC
4				
5				
6				
7				
8				
9				
10				
		40	= Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	40	Y	FAC
2	*Fraxinus pennsylvanica*	15	Y	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		55	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	8	20
Sapling/Shrub Stratum	0	0
Herb Stratum	11	28
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	50	x 3 =	150
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column totals	95 (A)		260 (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T5P3
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Toeslope-downgradient E of T5P1 Local relief (concave, convex, none): concave
Slope (%): 0-1 Lat.: Long.: Datum:
Soil Map Unit Name: Hw NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

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

Rapid Test

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	X	No	____	Depth (inches):	1
Water table present?	Yes	X	No	____	Depth (inches):	0
Saturation present? (includes capillary fringe)	Yes	X	No	____	Depth (inches):	0

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Shore of Rush Lake

SOIL **Sampling Point:** T5P3

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:
Rapid Test

VEGETATION - Use scientific names of plants

Sampling Point: T5P3

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Fraxinus pennsylvanica*	15	Y	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
		15 =	Total Cover	

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

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Phalaris arundinacea*	100	Y	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		100 =	Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 =	Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	3	8
Sapling/Shrub Stratum	0	0
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across 2 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	115	x 2 =	230
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	115 (A)		230 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- X Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T5P4
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): none
Slope (%): 3 Lat.: Long.: Datum:
Soil Map Unit Name: Os NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	Y		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

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

HYDROLOGY

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)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches):	
Water table present?	Yes ____	No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes X	No	____	Depth (inches):	20

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T5P4

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	10YR 2/1	100					LS	
11-16	2.5Y 6/2	80	7.5YR 5/6	20	C	M	LS	
16-24	5Y 7/1	85	7.5YR 6/6	15	C	M	S	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T5P4

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	25	Y	FAC
2	*Prunus serotina*	5	N	FACU
3				
4				
5				
6				
7				
8				
9				
10				
		30	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	50	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		50	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	50	Y	FAC
2	*Prunus serotina*	10	N	FACU
3	*Fraxinus pennsylvanica*	10	N	FACW
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		70	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	6	15
Sapling/Shrub Stratum	10	25
Herb Stratum	14	35
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across 3 (B)

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

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	125	x 3 =	375
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	150 (A)		455 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

_X_ Dominance test is >50%

___ Prevalence index is ≤3.0*

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

___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Dave Hahn Property City/County: Rush Lake/Winnebago Sampling Date: 10/28/2016
Applicant/Owner: Dave Hahn State: WI Sampling Point T5P5
Investigator(s): Stacey Henk, Garek Holley Section, Township, Range: Sec 27, T17N, R14E
Landform (hillslope, terrace, etc.): Backslope-upgradient S of T5P2 Local relief (concave, convex, none): concave
Slope (%): 3 Lat.: Long.: Datum:
Soil Map Unit Nam Os NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? circumstances" present? Yes
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? N

Is the sampled area within a wetland? N

If yes, optional wetland site ID: ____

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

HYDROLOGY

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

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

Field Observations:
Surface water present? Yes ____ No X Depth (inches): ____
Water table present? Yes ____ No X Depth (inches): ____
Saturation present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL **Sampling Point:** T5P5

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR 2/1	100					LS	
14-24	2.5Y 6/2	90	7.5YR 5/6	10	C	M	S	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

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

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: T5P5

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	30	Y	FAC
2	*Quercus macrocarpa*	10	Y	FACU
3				
4				
5				
6				
7				
8				
9				
10				
		40	= Total Cover	

Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	40	Y	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		40	= Total Cover	

Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status
1	*Rhamnus cathartica*	40	Y	FAC
2	*Anemone quinquefolia*	30	Y	FACU
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		70	= Total Cover	

Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0	= Total Cover	

50/20 Thresholds

	20%	50%
Tree Stratum	8	20
Sapling/Shrub Stratum	8	20
Herb Stratum	14	35
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 60.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	110	x 3 =	330
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column totals	150 (A)		490 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

_X_ Dominance test is >50%

___ Prevalence index is ≤3.0*

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

___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic vegetation present? Y

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

APPENDIX B

WETLAND PHOTOGRAPHS

Photo 1: Viewing east at Wetland 4; the shore of Rush Lake

Photo 2: Viewing northwest at the south side of Wetland 3

Photo 3: Viewing west at Wetland 2

Photo 4: Viewing east at upland from the driveway on the west side of the property

Photo 5: Viewing south at Wetland 5; the shore of Rush Lake

Photo 6: Viewing north at the southern region of Wetland 1 near T4P5

Photo 7: Viewing southeast at Wetland 5 in a mowed lawn area near T1P3

APPENDIX C

WINNEBAGO COUNTY SOIL RESOURCE MAP & HYDRIC SOIL REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Winnebago County, Wisconsin

December 5, 2016

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

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 1:20,000.

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: http://websoilsurvey.nrcs.usda.gov
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: Winnebago County, Wisconsin
Survey Area Data: Version 13, Sep 28, 2016

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

Date(s) aerial images were photographed: Apr 29, 2011—Sep 6, 2011

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

Winnebago County, Wisconsin (WI139)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FsB	Fox silt loam, 2 to 6 percent slopes	3.3	68.2%
Hw	Houghton muck, ponded, 0 to 2 percent slopes	1.0	21.5%
Os	Ossian silt loam	0.5	10.3%
Totals for Area of Interest		**4.8**	**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.

Winnebago County, Wisconsin

FsB—Fox silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2tjx0
Elevation: 570 to 1,150 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 124 to 176 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Fox

Setting

Landform: Outwash plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy glaciofluvial deposits over sandy and gravelly outwash

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 21 inches: silty clay loam
2Bt2 - 21 to 31 inches: sandy clay loam
3C - 31 to 79 inches: stratified sand to gravel

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 30 to 40 inches to strongly contrasting textural stratification
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 45 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Casco

Percent of map unit: 8 percent
Landform: Outwash plains
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

St. charles, gravelly substratum

Percent of map unit: 7 percent
Landform: Outwash plains
Hydric soil rating: No

Hw—Houghton muck, ponded, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2szfh
Elevation: 660 to 1,020 feet
Mean annual precipitation: 31 to 33 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 140 to 192 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Houghton, muck, ponded, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houghton, Muck, Ponded

Setting

Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material

Typical profile

Oa - 0 to 79 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 5.95 in/hr)
Depth to water table: About 0 inches

Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Houghton, muck

Percent of map unit: 3 percent
Landform: Lakebeds (relict)
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Adrian

Percent of map unit: 1 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Palms, muck, ponded

Percent of map unit: 1 percent
Landform: Interdrumlins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Os—Ossian silt loam

Map Unit Setting

National map unit symbol: g5z8
Elevation: 730 to 1,000 feet
Mean annual precipitation: 28 to 34 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 155 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Ossian and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ossian

Setting

Landform: Depressions, drainageways
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap,A12 - 0 to 12 inches: silt loam
B2g,B3g,C - 12 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
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 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: Yes

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

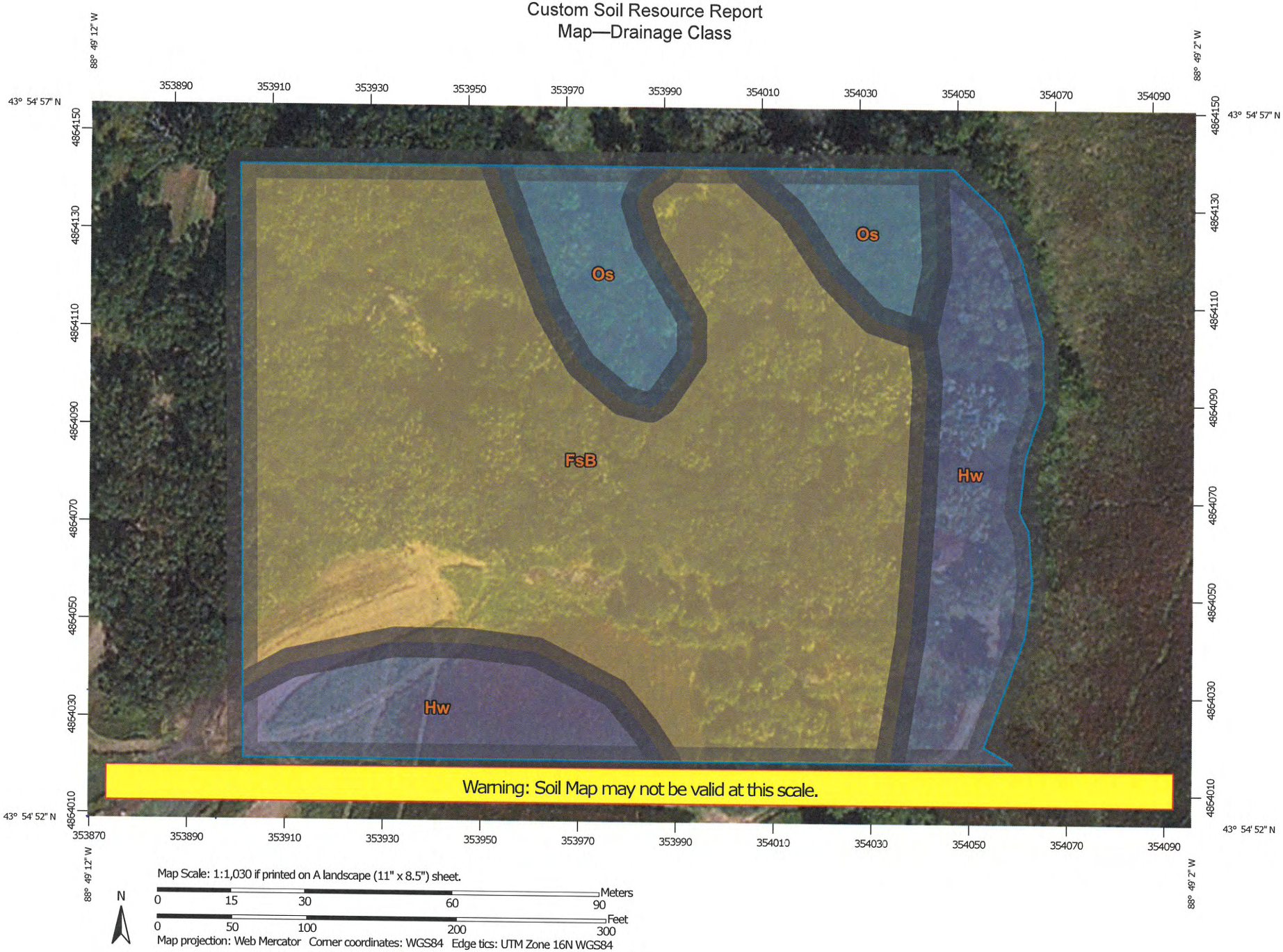
Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Drainage Class

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Custom Soil Resource Report
Map—Drainage Class



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: http://websoilsurvey.nrcs.usda.gov
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: Winnebago County, Wisconsin
Survey Area Data: Version 13, Sep 28, 2016

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

Date(s) aerial images were photographed: Apr 29, 2011—Sep 6, 2011

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.

Table—Drainage Class

Drainage Class— Summary by Map Unit — Winnebago County, Wisconsin (WI139)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
FsB	Fox silt loam, 2 to 6 percent slopes	Well drained	3.3	68.2%
Hw	Houghton muck, ponded, 0 to 2 percent slopes	Very poorly drained	1.0	21.5%
Os	Ossian silt loam	Poorly drained	0.5	10.3%
Totals for Area of Interest			**4.8**	**100.0%**

Rating Options—Drainage Class

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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)–Winnebago County, Wisconsin			
Map Unit Symbol	Map Unit Name	Hydric Percent of Map Unit	Hydric Category
FsB	Fox silt loam, 2 to 6 percent slopes	0	WI Nonhydric
Hw	Houghton muck, ponded, 0 to 2 percent slopes	100	WI Hydric
Os	Ossian silt loam	100	WI Hydric

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:

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Hydric Soils–Winnebago County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
Hw—Houghton muck, ponded, 0 to 2 percent slopes				
	Houghton, muck, ponded	95	Depressions	1, 3
	Houghton, muck	3	Lakebeds (relict)	1, 3
	Adrian	1	Lakebeds (relict)	1, 3
	Palms, muck, ponded	1	Interdrumlins	1, 3
Os—Ossian silt loam				
	Ossian	100	Depressions, drainageways	2, 3

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