evergreen consultants LLC
2918 Van Hoof Road • Green Bay, WI 54313
Phone: 920.615.0019 • Website: www.evergreenwis.com

Endeavor Business Park

-Lots 3, 4, 5, 6, 13, 16, 22, 24, & Outlot 1

Professionally Assured Wetland Delineation Report

Project Number: WSH20-013-01

Property Address: Lots 3, 4, 5, 6, 13, 16, 22, 24, & Outlot 1 of the Endeavor Business Park, Village of Richfield, Washington County, Wisconsin

Parcel ID's: 0008003, 0008004, 0008005, 0008006, 0008013, 0008016, 0008031, 0008027, & 0008017

October 29, 2020

Report Request by

EXCEL ENGINEERING
Always a better plan

100 Camelot Drive
Fond du Lac, Wisconsin 54935

evergreen consultants LLC
2918 Van Hoof Road • Green Bay, WI 54313
Phone: 920.615.0019 • Website: www.evergreenwis.com

Field Work Certification:

Ben J LaCount, PLS, Planner, Wetland Scientist
Wisconsin DNR Professional Assured Wetland Delineator
Lead Wetland Delineator
(920) 265-4105 *ben@evergreenwis.com*

Shyann P Banker, Environmental Specialist
(920) 915-2629 *shyann@evergreenwis.com*

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Executive Summary

Evergreen Consultants LLC (Evergreen) was retained by Excel Engineering, to perform a professionally assured wetland delineation. The delineation/project area is all of Washington County Tax Parcels 0008003, 0008004, 0008005, 0008006, 0008013, 0008016, 0008031, 0008027, & 0008017, located in part of the Northwest ¼ of Section 01 of Township 09 North, Range 19 East, located within the Endeavor Business Park- Lots 3, 4, 5, 6, 13, 16, 22, 24, and Outlot 1, Village of Richfield, Washington County, Wisconsin.

The project area is shown on the Wetland Delineation Map as the Site Boundary, hereafter described as the "Site". The Wetland Delineation Map is in Appendix A. Evergreen was directed to delineate the project area for future planning purposes. The property had once been mostly cleared cropland. The area was developed as a business park between 2002 and 2007. Much of the Site remains as vacant lots that are active cropland.

The wetland delineation was certified complete on October 29, 2020 by Benjamin J La Count, PLS, Wisconsin DNR Professionally Assured Wetland Delineator, with assistance from Chad M Fradette, EP, Chemist, WDNR Professionally Assured Wetland Delineator, and Shyann P Banker, Environmental Specialist. Mr. La Count was the Lead Wetland Delineator for the project.

Nine wetland areas were identified during fieldwork:

- Wetland 1 is a degraded wet meadow infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 732 square feet within the Site Boundary.
- Wetlands 2 and 3 are degraded wet meadows infested with reed canary grass and hybrid cattail located within an excavated roadside ditch that is separated by a farm drive, connected via a culvert underneath the driveway. Wetland 2 is 2,020 square feet and Wetland 3 is 791 square feet within the Site Boundary.
- Wetland 4 is a wet meadow colonized by weedy hydrophytic species, located within a depression in a field and is 3,641 square feet.
- Wetland 5 consists of a mix of wetland habitat types, wet meadow, and hardwood swamp. The wet meadow is in the western one-third of the wetland. It is infested with reed canary grass. The eastern two-thirds are hardwood swamp with muck soils that is dominated by willow and box elder and is infested by buckthorn and reed canary grass. The entire wetlands are in a depression and are 18,177 square feet within the Site Boundary.
- Wetland 6 is a degraded wet meadow infested with hybrid cattail located within an excavated roadside ditch and is 449 square feet within the Site Boundary.
- Wetland 7 is a complex in a large, deep depression, and on a shrubby slope down-gradient of a groundwater seep. It consists of a mix of wetland habitat types, sedge meadow, wet meadow, scrub-shrub, and shallow marsh. The sedge meadow and shallow marsh are concentrated mostly in the center of the wetland. A mix of cattail marsh, sedge meadow, wet meadow, and scrub-shrub are in the outer edges of the wetlands. Scrub-shrub habitat is on the eastern slope to a groundwater seep. Much of the wetlands are infested with reed canary grass and hybrid cattail. Wetland 7 is 75,337 square feet within the Site Boundary.
- Wetland 8 is degraded shallow marsh infested with hybrid cattail located within an excavated roadside ditch and is 3,579 square feet within the Site Boundary.

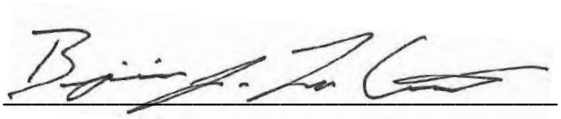
- Wetland 9 is a degraded mixture of wet meadow and shallow marsh infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 193 square feet within the Site Boundary.

It is our opinion that Wetlands 1, 2, 3, 6, 8, and 9 may meet the definition of artificial wetlands as defined in WI Statute 281.36 (4n)(a)1. These wetlands are located within excavated roadside ditches constructed during the development of the Endeavor Business Park between 2005 and 2007.

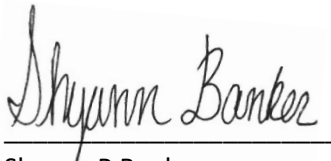
It is also our opinion that Wetlands 1, 2, 3, 4, 6, 8, and 9 are not "Water of the United States" (WOUS) as defined in the Code of Federal Regulations 40 CFR 328.3. Wetlands 1, 2, 3, 6, 8, and 9 would be considered (b)(10) stormwater control features and Wetland 4 would be considered an (b)(1) non-adjacent waters.

Wetland 1, 2, 3, 4, 6, 8, and 9 may meet the definition of an exempt non-federal wetlands as defined in Wisconsin Statute 281.36(4n)5(b). If a discharge into the Wetlands is necessary for a project a notification must be given to the Wisconsin DNR Wetland ID Program and the local DNR Water Management Specialist and an Approved Jurisdictional Determination must be received from the US Army Corps of Engineers (USACE) prior to commencement of the project or a wetland general permit application could be submitted.

Benjamin J LaCount is a WDNR Professionally Assured Wetland Delineator and WDNR concurrence is granted for five years and some wetlands on-site may have concurrence for 15 years if the conditions of WI Statute 23.321 (5)(b) 1 apply. For wetlands to be confirmed as exempt from state regulatory authority an exemption determination application must be submitted to the DNR Wetland ID Program whose staff makes the final decision.



Benjamin J LaCount, PLS
WI Professionally Assured Wetland Delineator
Lead Wetland Delineator



Shyann P Banker
Environmental Specialist

1.0 INTRODUCTION

1.1 Purpose

Evergreen was retained by Excel Engineering to perform a professionally assured wetland delineation in preparation for site development.

Nine wetland areas were identified during fieldwork:

- Wetland 1 is a degraded wet meadow infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 732 square feet within the Site Boundary.
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- Wetland 9 is a degraded mixture of wet meadow and shallow marsh infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 193 square feet within the Site Boundary.

1.2 Personnel

The wetland delineation was certified complete on October 29, 2020 by Benjamin J La Count, PLS, Wisconsin DNR Professionally Assured Wetland Delineator, with assistance from Shyann P Banker, Environmental Specialist. Mr. La Count was the Lead Wetland Delineator for the project.

Mr. LaCount is a Professional Land Surveyor and WDNR Professionally Assured Wetland Delineator and has over eleven years of experience conducting wetland delineations. Mr. LaCount has completed the Basic and Advanced Wetland Delineation Training, Basic Plant Identification for Wetlands and Grasses/Sedges/Rushes courses sponsored by UW-La Crosse Continuing Education/Extension. Mr. LaCount has also completed the Advanced Hydric Soils and Problematic Wetland Delineation courses conducted by the Wetland Training Institute and the Advanced Wetland Plant ID: Grasses/Sedges/Rushes and Aerial Photo Review courses conducted by the USACE and the University of Minnesota Wetland Delineator Certification Program.

Mrs. Shyann Banker, Environmental Specialist has four years of experience conducting wetland delineations. Mrs. Banker has completed the Basic and Advanced Wetland Delineation Training and Basic Plant Identification for Wetlands courses sponsored by UW-La Crosse Continuing Education/Extension.

2.0 METHODOLOGY

Wetland boundaries were determined based on the comprehensive wetland delineation method as defined in the *Corps of Engineers Wetlands Delineation Manual* (USACE, Waterways Experiment Station, Wetlands Research Program Technical Report Y-87-1) and the *Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regions* (NC/NE Regional Supplement) (USACE ERDC, 2012).

Soil data, aerial photographs and topography information available on Washington County's GIS website were reviewed prior to the site visit to determine areas for investigation and included: areas shown as having hydric inclusionary soils as shown on the NRCS National Cooperative Soil Survey and the WDNR Surface Water Data Viewer. Vegetation, soils and hydrology were investigated during the Site visits to determine the location of wetland boundaries.

2.1 Resources

The following resources were used:

Site topography:	USGS Quadrangle Maps
	Washington County Light Detection and Ranging (LiDAR) Topography
Soils:	Washington County Soil Survey
	Natural Resource Conservation Service (NRCS) Web Soil Survey (NRCS 2020).
Land Use:	Historic and recent aerial photographs
Wetlands:	Wisconsin Wetland Inventory (viewed via the Surface Water Data Viewer)
	National Wetland Inventory (NWI)

2.2 Equipment Used

The following equipment was used:

Six-foot stick tape
Soil auger, trenching shovel
Munsell soil color charts
Leica Zeno GG04 GPS

2.3. Vegetation

Vegetation was documented on the NC/NE Regional Supplement data forms. Percent cover of each species for the herbaceous stratum (5-foot radius plot), shrub/sapling stratum (15-foot radius plot) and tree and woody vine stratum (30-foot radius plot) were estimated. Rectangular sample plots were used when plant communities would overlap using circular sample plots or when a community was narrower than the radius. Wetland indicator status was taken from the Lichvar, R.W. 2016, *The National Wetland Plant List, State of Wisconsin 2016 Wetland Plant List*. Dominant species were determined by applying the 50/20 rule. The Dominance Test Worksheet and Prevalence Index Worksheet were completed. Hydrophytic Vegetation Indicators were applied and a decision was made regarding the dominance of hydrophytic vegetation.

2.4. Soils

Soil test pits were excavated with a trenching shovel and a soil probe to a depth of at least 24" at each sampling point. The presence and percentage of mottling, matrix color, and texture was documented on

the NC/NE Regional Supplement data forms for each layer. The Munsell Soil Color Charts were used to determine the hue, value and chroma of observed moist soils. After the profile was documented it was determined if a hydric soil indicator was met at that sample point.

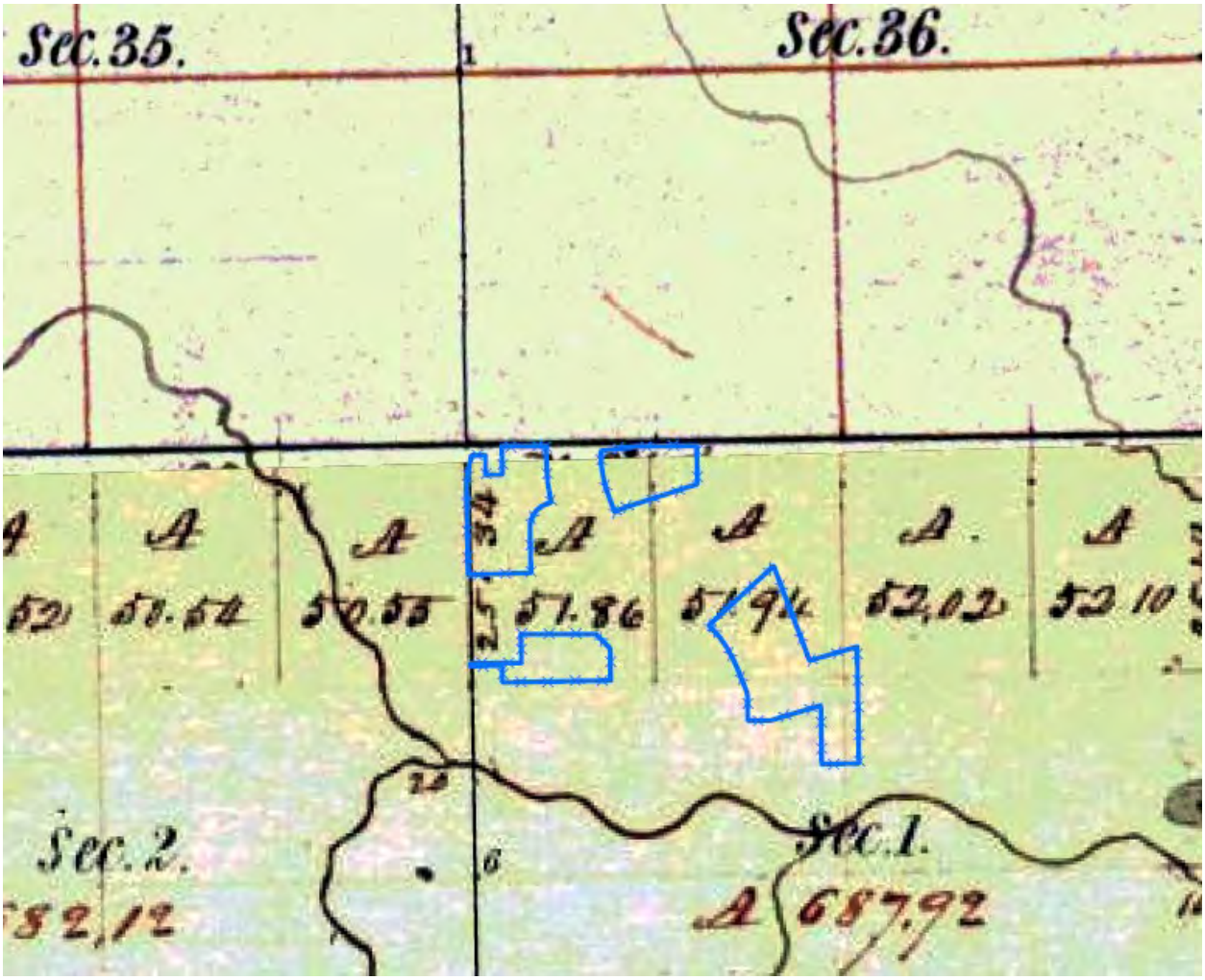
2.5. Hydrology

Before an on-site investigation, FSA aerial slides and aerial photographs were reviewed for the presence of surface water or saturated soil conditions. Each sample point was investigated for saturated soil conditions, water table and surface water and if present they were measured and recorded on the NC/NE Regional Supplement data form. The area was also investigated for Primary and Secondary Hydrologic Indicators as listed on the NC/NE Regional Supplement data form.

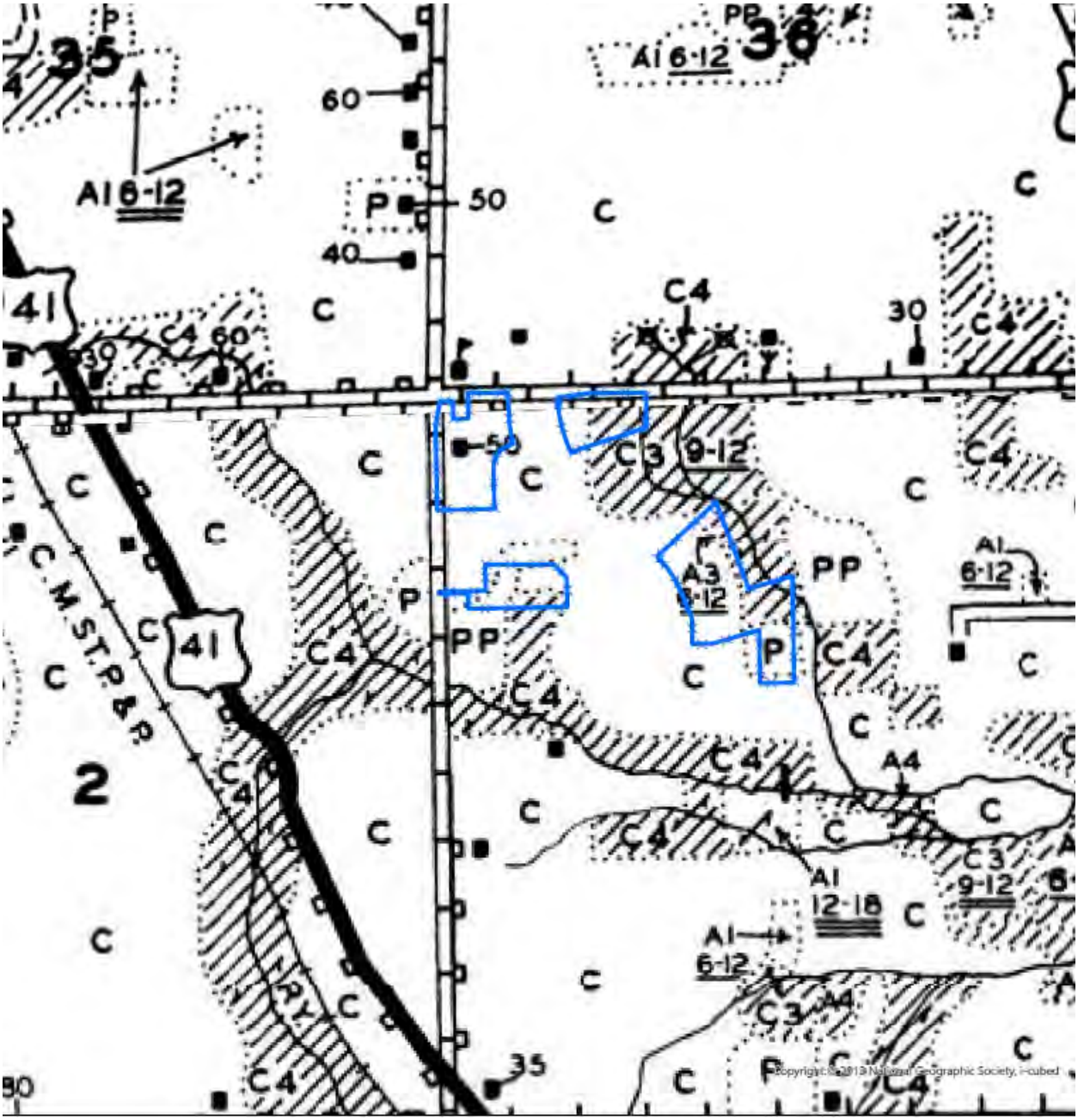
3.0 SITE CHARACTERISTICS

3.1 Land Use

The Original Survey shows the Site in the northwest corner of Section 1. The Original Survey Notes describe the vegetation in this area as basswood, beech, sugar maple, and ironwood.



Original Survey



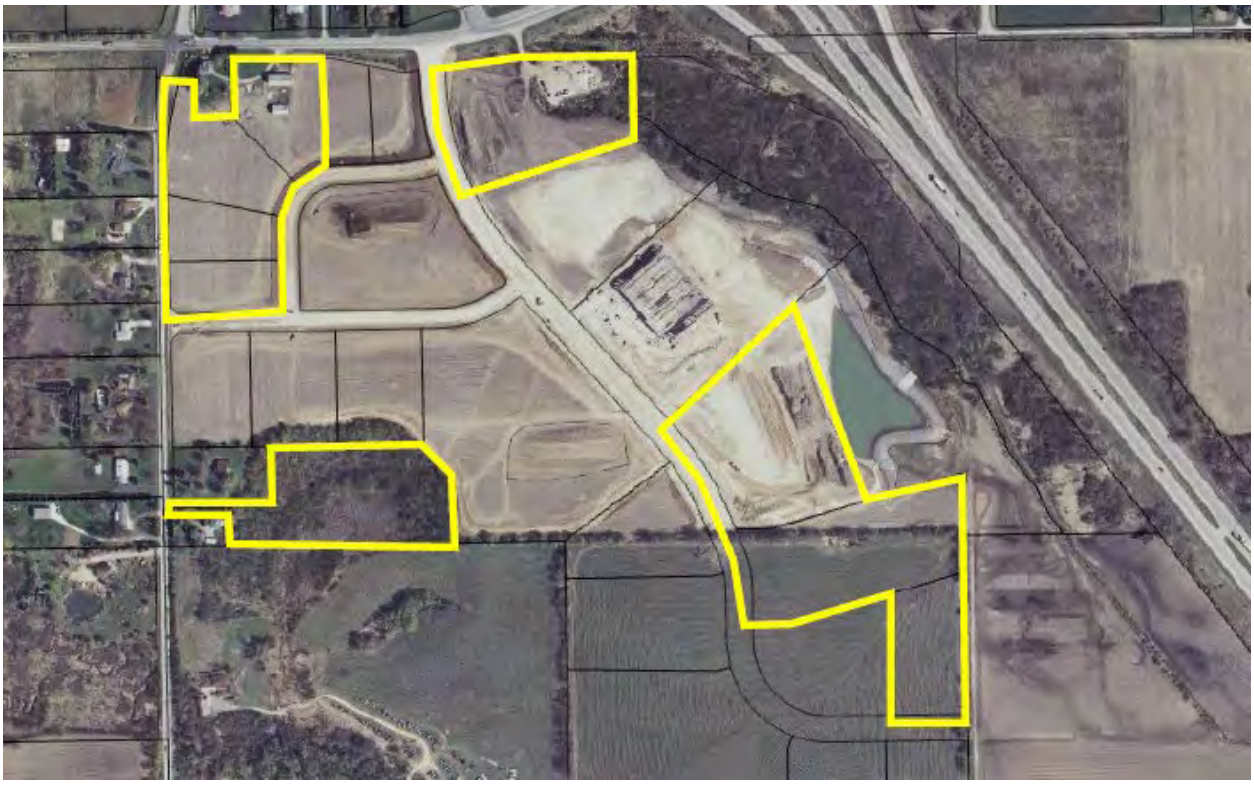
Bordner Survey

The Bordner Survey shows the Site as cleared cropland, permanent pasture, swamp hardwoods, grass marsh, and tamarack. The Original Survey, Survey Notes and Bordner Survey are in Appendix C.

Aerial photographs from 1937, 1941, 1950, 1963, 1970, 1979-2002, 2005, 2010, 2013, 2015, and 2017 were reviewed.

1941- The Site is cropland with the southwest Site Boundary being a swamp with a residence in the northwest Site Boundary.

2000- The Site is cropland with the southwest Site Boundary is a swamp. The northwest Site Boundary has a building within the northeast corner.



2005- Between 2002 and 2005 the area was developed into a business park. Roads were constructed throughout the area adjacent to the Site Boundaries. The north half of the southeast Site Boundary was filled/graded.

2017- The northwest and southeast Site boundaries are cropland with the northeast Site boundary being partially cropped and woodland, and the southwest Site boundary being wooded and swamp.

3.2 Topography

The topography at the Site ranges from an elevation of 972 feet down to 879 feet. The topography of the Site slopes down towards the southeast corner of the Site. The Topography Map is located in Appendix A.

Topographic Map

3.3 *Precipitation*

Precipitation information was reviewed from the Hartford 2.9 ENE, Washington County, WI Station. A 90 Day Antecedent Precipitation Rolling Total from the end of July through mid-October 2020 is shown below. Precipitation from the end of July until the beginning of August was normal precipitation and then dropped to below normal precipitation until the end of August. Precipitation was in the normal range from the end of August until the beginning of September and then rose to above normal precipitation until the beginning of October. Precipitation dropped into the normal range from the beginning of October until the Site visit at the end of October. Raw precipitation data is in Appendix F. The antecedent precipitation for approximately 90 days prior to the Site visit in October was normal.

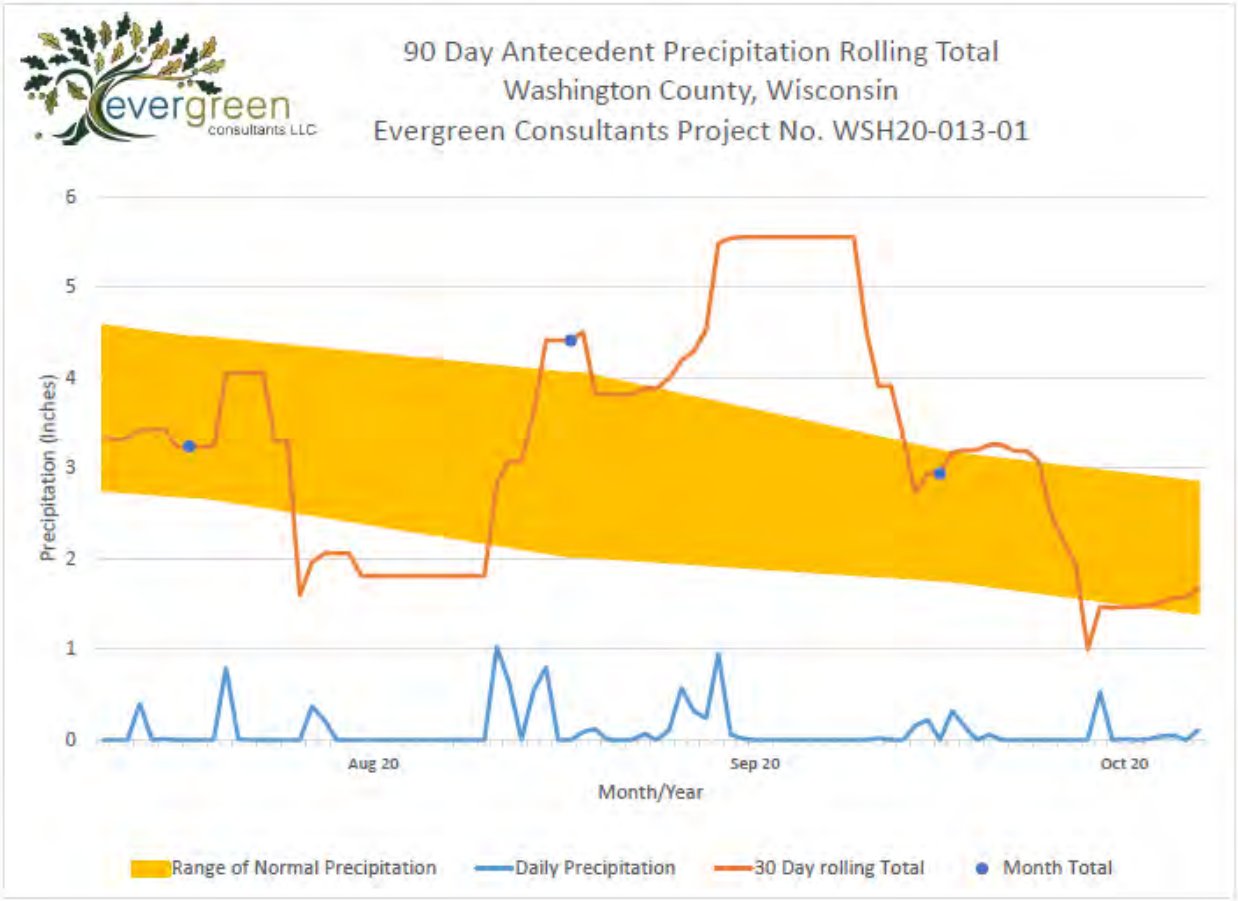


Chart 1. 90 Day Antecedent precipitation Rolling Total Summary between July-October 2020 in Washington County, Wisconsin

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	11/17/2020	**Landowner/Project**	WSH20-013-01
Weather Station	Hartford 2 W, WI	**State**	Wisconsin
County	Washington County	**Growing Season**	yes
Photo/obs Date	10/29/2020	**Soil Name**	Ashkum silty clay loam

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	September	2.03	4.04	3.32	N	2	3	6
2nd Prior Month*	August	2.69	4.44	3.78	N	2	2	4
3rd Prior Month*	July	3.00	4.99	4.29	N	2	1	2
							Sum	**12**

*compared to photo/observation date

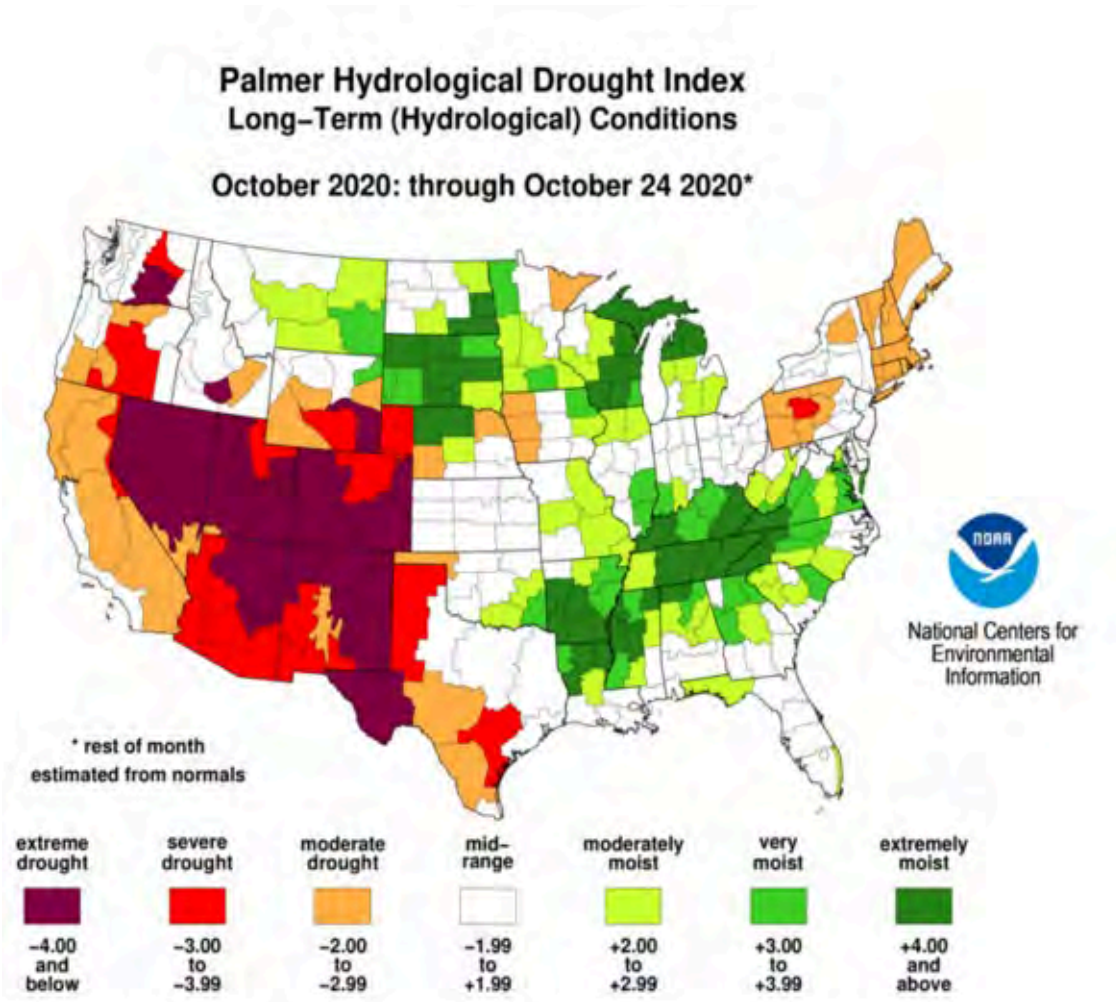
Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: **prior period has been normal**

Table 1. Precipitation Summary between July and September 2020 in Washington County, Wisconsin

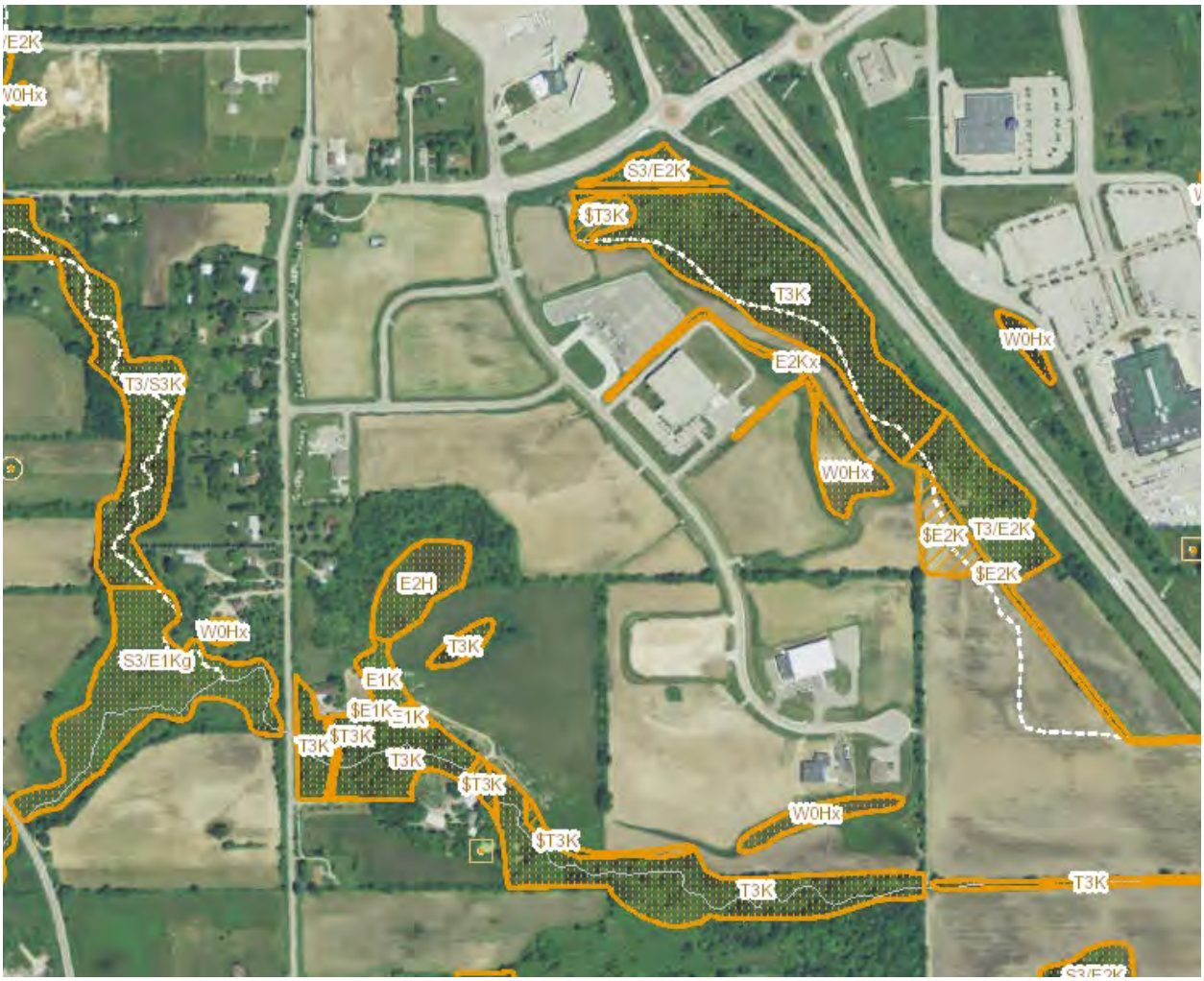
Precipitation values are measured in inches.
Sources: National Oceanic & Atmospheric Administration, Midwest Regional Climate Center



Sources: National Oceanic & Atmospheric Administration, Palmer Hydrological Drought Index
The index shows the area as very moist.

3.4 Wetland Mapping

The Wisconsin Wetland Inventory (WWI), viewed via the Surface Water Data Viewer, and the National Wetland Inventory (NWI) were reviewed. The Surface Water Data Viewer shows the Site having hydric soil indicators in portions of the Site with mapped wetlands in the northeast, southeast, and southwest Site Boundaries.



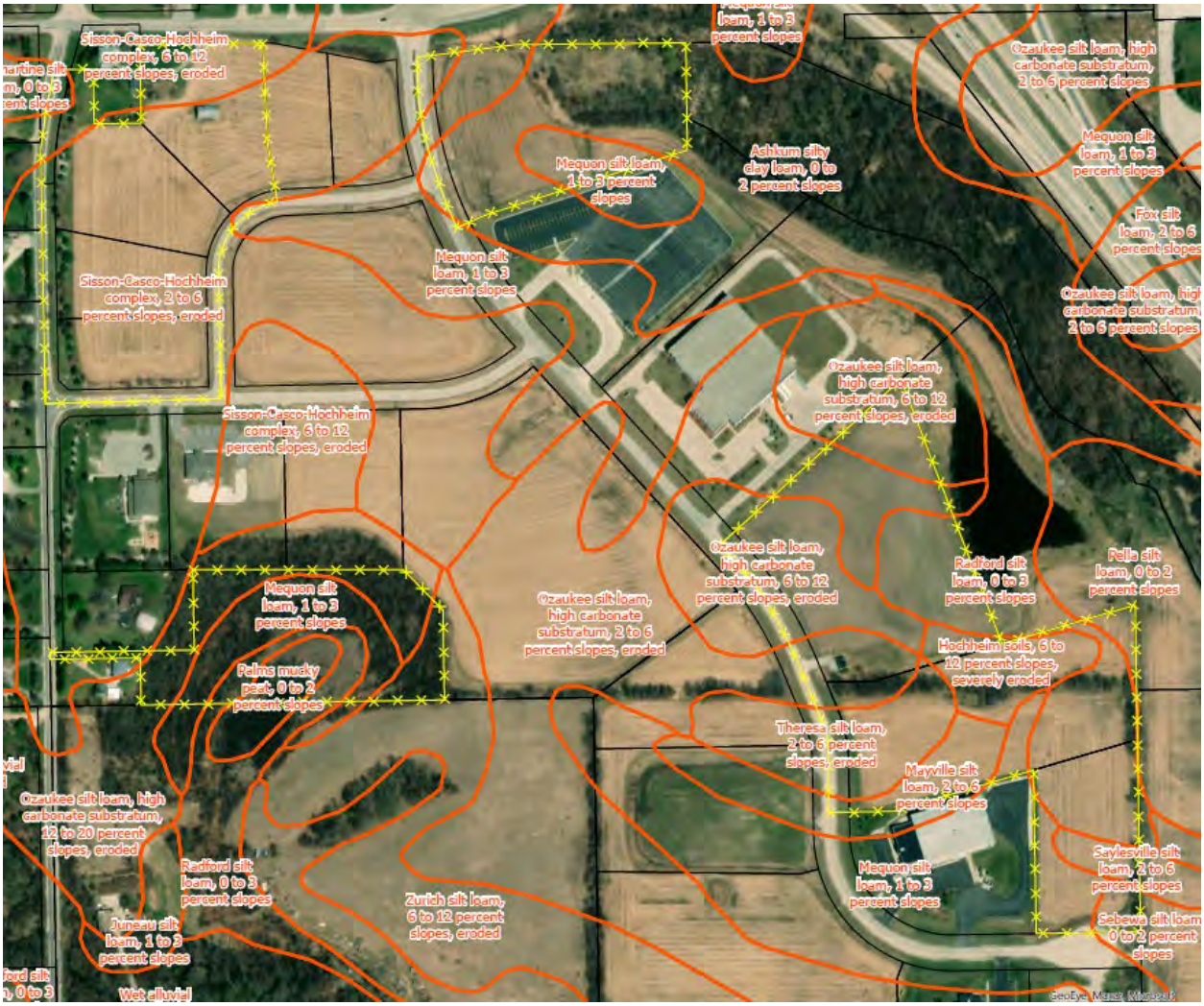
Surface Water Data Viewer

National Wetland Inventory Map

The National Wetland Inventory Map shows a freshwater forested/shrub wetland in the northeast Site Boundary and a freshwater emergent wetland in the southwest corner of the Site Boundary. The surface Water Data Viewer and National Wetland Inventory Maps are in Appendix A.

3.5 Mapped Soils

The NRCS Web Soil Survey and the Soil Survey of Washington County, Wisconsin, indicate the presence of the following soil types:



Report—Hydric Soil List - All Components

Hydric Soil List - All Components–WI131-Washington County, Wisconsin					
Map symbol and map unit name	Component/Local Phase	Comp. pct.	Landform	Hydric status	Hydric criteria met (code)
Am: Alluvial land	Alluvial land	90	Alluvial flats	No	—
	Wet alluvial land	10	Flood plains	Yes	2,3,4
AtA: Ashkum silty clay loam, 0 to 2 percent slopes	Ashkum-Drained	85-100	End moraines,ground moraines	Yes	2
	Peotone-Drained	0-9	Depressions on ground moraines	Yes	2
	Orthents, clayey	0-3	Lake plains,ground moraines	No	—
	Urban land	0-3	Ground moraines	No	—
FsB: Fox silt loam, 2 to 6 percent slopes	Fox	80-90	Outwash plains	No	—
	Casco	5-10	Outwash plains	No	—
	St. Charles-Gravelly substratum	5-10	Outwash plains	No	—
HmB: Hochheim loam, 2 to 6 percent slopes	Hochheim	85-92	Drumlins	No	—
	Theresa	5-8	Drumlins	No	—
	Lamartine	3-7	Drumlins	No	—
HmB2: Hochheim loam, 2 to 6 percent slopes, eroded	Hochheim-Eroded	80-91	Drumlins	No	—
	Theresa-Eroded	6-12	Till plains	No	—
	Lamartine	3-8	Drumlins	No	—
HmC2: Hochheim loam, 6 to 12 percent slopes, eroded	Hochheim-Eroded	85-92	Drumlins	No	—
	Hochheim	4-7	Drumlins	No	—
	Theresa	4-8	Drumlins	No	—
HoC3: Hochheim soils, 6 to 12 percent slopes, severely eroded	Hochheim	60	Till plains	No	—
	Hochheim	40	Till plains	No	—
JuA: Juneau silt loam, 1 to 3 percent slopes	Juneau	100	Drumlins	No	—
LmA: Lamartine silt loam, 0 to 3 percent slopes	Lamartine	80-91	Interdrumlins	No	—
	Pella	6-11	Drainageways	Yes	2,3
	Ossian	3-9	Depressions	Yes	2,3
MoB: Mayville silt loam, 2 to 6 percent slopes	Mayville	80-95	Drumlins	No	—
	Dodge	5-17	Drumlins	No	—
	Lamartine	0-3	Drumlins	No	—

MtA: Mequon silt loam, 1 to 3 percent slopes	Mequon	90	Drainageways	No	—
	Ashkum	10	Depressions	Yes	2,3
OuB: Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes	Ozaukee-High carbonate substratum	92-100	End moraines,ground moraines	No	—
	Ashkum-Drained	0-5	Ground moraines,end moraines	Yes	2
	Orthents, clayey	0-3	Ground moraines	No	—
	Urban land	0-3	Ground moraines	No	—
OuB2: Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded	Ozaukee-High carbonate substratum, eroded	92-100	Ground moraines,end moraines	No	—
	Ashkum-Drained	0-5	Ground moraines,end moraines	Yes	2
	Urban land	0-3	Ground moraines	No	—
	Orthents, clayey	0-3	Ground moraines	No	—
OuC2: Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded	Ozaukee-High carbonate substratum, eroded	88-100	End moraines,ground moraines	No	—
	Ozaukee-Severely eroded	0-5	End moraines,ground moraines	No	—
	Urban land	0-5	Ground moraines	No	—
	Mequon	0-5	Ground moraines	No	—
OuD2: Ozaukee silt loam, high carbonate substratum, 12 to 20 percent slopes, eroded	Ozaukee-High carbonate substratum, eroded	88-100	Ground moraines,end moraines	No	—
	Ozaukee-Severely eroded	0-5	Ground moraines,end moraines	No	—
	Mequon	0-5	Ground moraines	No	—
	Urban land	0-5	Ground moraines	No	—
Pc: Palms mucky peat, 0 to 2 percent slopes	Palms-Mucky peat	80-95	Interdrumlins	Yes	1,2,3
	Houghton-Mucky peat	3-15	Depressions	Yes	1,2,3
	Adrian	2-5	Interdrumlins	Yes	1,3
Ph: Pella silt loam, 0 to 2 percent slopes	Pella	80-91	Drainageways	Yes	2,3
	Kendall	5-9	Drainageways	No	—
	Lamartine	4-8	Drainageways	No	—
	Palms-Muck	1-3	Depressions	Yes	1,3
RaA: Radford silt loam, 0 to 3 percent slopes	Radford	80-95	Flood plains,drainageways	No	—
	Otter	2-8	Flood plains,drainageways	Yes	2,3

	Sable	2-5	Depressions	Yes	2,3
	Sebewa	1-4	Depressions	Yes	2,3
	Drummer	0-3	Depressions	Yes	2,3
ShB: Saylesville silt loam, 2 to 6 percent slopes	Saylesville	100	Lakebeds (relict)	No	—
Sm: Sebewa silt loam, 0 to 2 percent slopes	Sebewa	80-95	Depressions	Yes	2,3
	Adrian	3-12	Lakebeds (relict)	Yes	1,3
	Ionia	1-5	Rises	No	—
	Fox	0-3	Rises	No	—
SvB2: Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded	Sisson	31	Terminal moraines	No	—
	Casco	29	Terminal moraines	No	—
	Hochheim	20	Terminal moraines	No	—
SvC2: Sisson-Casco-Hochheim complex, 6 to 12 percent slopes, eroded	Sisson	31	Terminal moraines	No	—
	Casco	29	Terminal moraines	No	—
	Hochheim	20	Terminal moraines	No	—
ThB2: Theresa silt loam, 2 to 6 percent slopes, eroded	Theresa-Eroded	80-90	Drumlins	No	—
	Hochheim-Eroded	9-15	Drumlins	No	—
	Lamartine	1-5	Drumlins	No	—
Ww: Wet alluvial land	Wet alluvial land	100	Depressions on alluvial flats,drainageways on alluvial flats,flood plains on alluvial flats	Yes	2,3,4
ZuC2: Zurich silt loam, 6 to 12 percent slopes, eroded	Zurich-Eroded	85-95	Lakebeds (relict)	No	—
	Dresden	3-6	Stream terraces	No	—
	Wauconda	2-5	Lakebeds (relict)	No	—
	Orthents-Loamy	0-4	Lake plains,outwash plains,lakebeds (relict),ground moraines	No	—

Note: NRCS County Soil Survey Report is located in Appendix E.

4.0 FIELD INVESTIGATIONS

Nine wetland areas were identified during fieldwork:

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- Wetland 5 consists of a mix of wetland habitat types, wet meadow, and hardwood swamp. The wet meadow is in the western one-third of the wetland. It is infested with reed canary grass. The eastern two-thirds are hardwood swamp with muck soils that is dominated by willow and box elder and is infested by buckthorn and reed canary grass. The entire wetlands are in a depression and are 18,177 square feet within the Site Boundary.
- Wetland 6 is a degraded wet meadow infested with hybrid cattail located within an excavated roadside ditch and is 449 square feet within the Site Boundary.
- Wetland 7 is a complex in a large, deep depression, and on a shrubby slope down-gradient of a groundwater seep. It consists of a mix of wetland habitat types, sedge meadow, wet meadow, scrub-shrub, and shallow marsh. The sedge meadow and shallow marsh are concentrated mostly in the center of the wetland. A mix of cattail marsh, sedge meadow, wet meadow, and scrub-shrub are in the outer edges of the wetlands. Scrub-shrub habitat is on the eastern slope to a groundwater seep. Much of the wetlands are infested with reed canary grass and hybrid cattail. Wetland 7 is 75,337 square feet within the Site Boundary.
- Wetland 8 is degraded shallow marsh infested with hybrid cattail located within an excavated roadside ditch and is 3,579 square feet within the Site Boundary.
- Wetland 9 is a degraded mixture of wet meadow and shallow marsh infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 193 square feet within the Site Boundary.

Determination Forms are in Appendix G.

Wetland 1: A degraded wet meadow infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 732 square feet within the Site Boundary.

Wetland 1 would be considered **E2Kx** (emergent/wet meadow, narrow-leaved persistent with wet soil, palustrine, excavated). The wetland boundary for Wetland 1 is located along a topography break within a roadside ditch. The wet meadow is within an excavated roadside ditch that was constructed in 2005 during a business park development. The minimal slope of the ditch, dense vegetation and micro topography create poor drainage and hold water within the ditch for prolonged periods of time. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

No primary hydrology indicators were observed in Wetland 1. The secondary hydrology indicators observed in Wetland 1 include microtopographic relief (D4), and a positive FAC-neutral test (D5). The ditch has microphotographic relief where water persist. The ditch is not maintained very well so the ups and downs in the ditch and dense vegetation cause water to pond and backup in portions of the ditch.

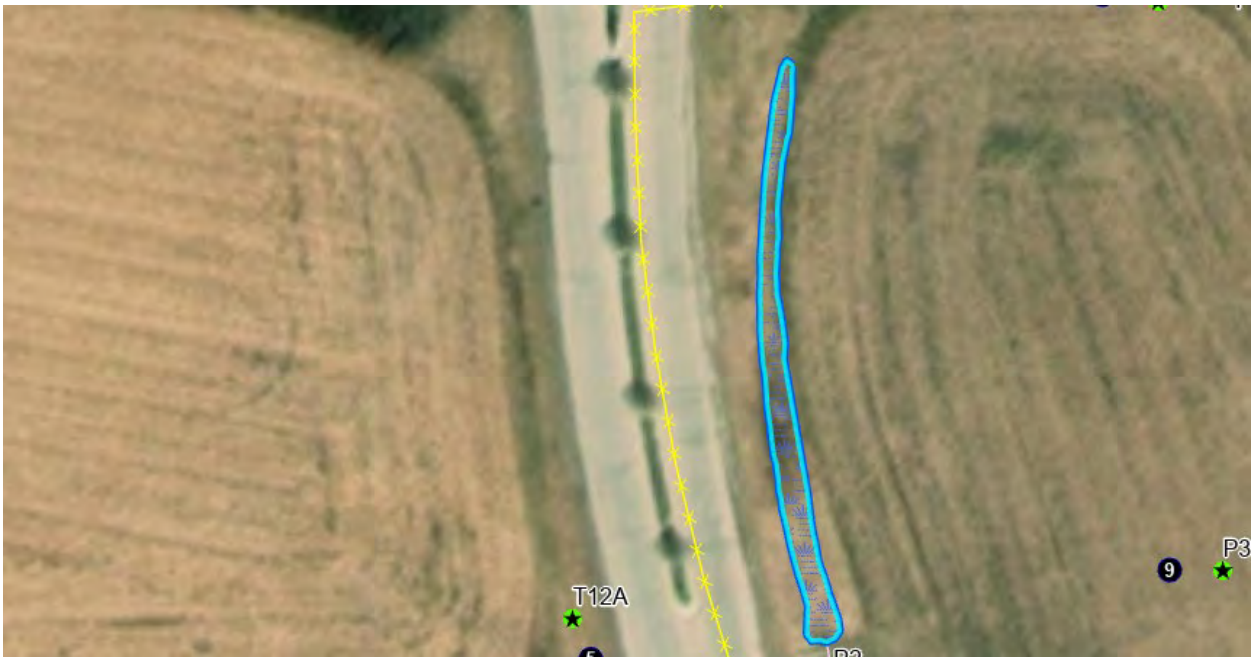
Excavated roadside ditch infested with cattail and reed canary grass.

The dominant hydrophytic vegetation observed:

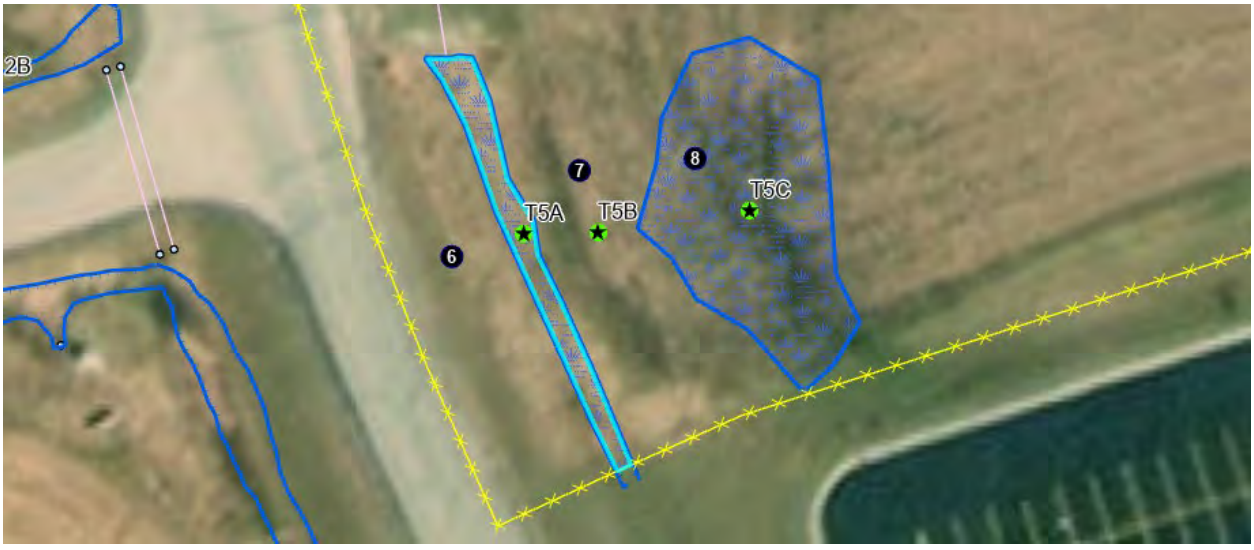
- *Phalaris arundinacea* (reed canary grass, FACW)
- *Typha x glauca* (hybrid cattail, OBL)

The soil in Wetland 1 meets hydric soil indicator redox dark surface (F6). The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick.

Wetlands 2 & 3: Degraded wet meadows infested with reed canary grass and hybrid cattail located within an excavated roadside ditch that is separated by a farm drive, connected via a culvert underneath the driveway. Wetland 2 is 2,020 square feet and Wetland 3 is 791 square feet within the Site Boundary. They are both located within an excavated roadside ditch that extends beyond the Site boundary to the south. The ditches have minimal slope, dense vegetation and micro topography that create poor drainage and hold water within the ditches for prolonged periods of time.



Wetland 2



Wetland 3

Wetlands 2 & 3 would be considered **E2Kx** (emergent/wet meadow, narrow-leaved persistent with wet soil, palustrine, excavated). The wetland boundary for Wetlands 2 & 3 is located along a topography break within a roadside ditch. The wet meadow is within an excavated roadside ditch that was constructed in 2005 during a business park development and is nearly level. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

No primary hydrology indicators were observed in Wetlands 2 & 3. The secondary hydrology indicators observed in Wetlands 2 & 3 include geomorphic position (D2), microtopographic relief (D4), and a positive FAC-neutral test (D5). This is a nearly level roadside ditch where water persists for prolonged periods of time.

Standing on the farm drive between the wetlands facing north towards Wetland 2.

The dominant hydrophytic vegetation observed:

- *Phalaris arundinacea* (reed canary grass, FACW)
- *Cyperus esculentus* (yellow nutsedge, FACW)

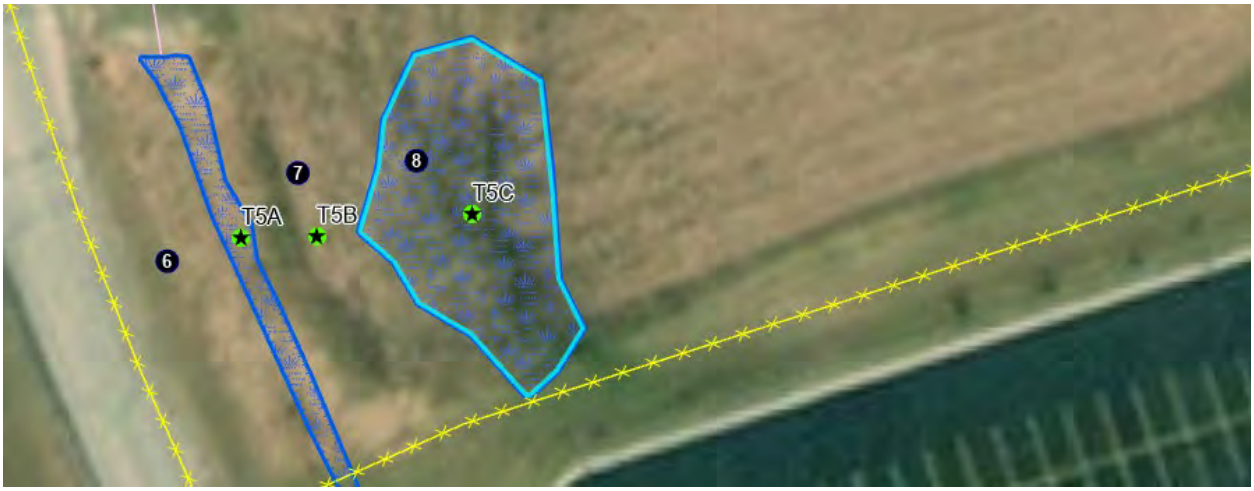
The dominant non-hydrophytic vegetation observed:

- *Poa pratensis* (Kentucky bluegrass, FACU)

The soil in Wetlands 2 & 3 meets hydric soil indicator redox dark surface (F6). The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick.

Standing near T5A within the roadside ditch of Wetland 3.

Wetland 4: A wet meadow colonized by weedy hydrophytic species, located within a depression in a field and is 3,641 square feet.



Wetland 4 would be considered **E2Kx** (emergent/wet meadow, narrow-leaved persistent with wet soil, palustrine, excavated). The wetland boundary for Wetland 4 is located along a topography break within a depression. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

No primary hydrology indicators were observed in Wetland 4. The secondary hydrology indicators observed in Wetland 4 include stunted or stressed plants (D1), geomorphic position (D2), and a positive FAC-neutral test (D5). This area has spots of drowned out crops and crop stress. Tractor ruts have standing water, but it is not connected to a water table, most likely from recent rainfall ponding on compacted soil.

Low spot within a cropped field, tractor tire ruts within the depression.

The dominant hydrophytic vegetation observed:

- *Phalaris arundinacea* (reed canary grass, FACW)
- *Echinochloa crus-galli* (barnyard grass, FAC)

The soil in Wetland 4 meets hydric soil indicator redox dark surface (F6). The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick.

Wetland 5: Consists of a mix of wetland habitat types, wet meadow, and hardwood swamp. The wet meadow is in the western one-third of the wetland. It is infested with reed canary grass. The eastern two-thirds are hardwood swamp with muck soils that is dominated by willow and box elder and is infested by buckthorn and reed canary grass. The entire wetlands are in a depression and are 18,177 square feet within the Site Boundary.

Wetland 5 would be considered **T3/S3/E2Kx** (Forested, broad-leaved deciduous, Scrub-shrub, broad-leaved deciduous/ Emergent-wet meadow, narrow-leaved persistent with wet soil, palustrine, partially excavated). The wetland boundary for Wetland 5 is located along a topography break within a depression. The wet meadow is within a ditch which drains into a hardwood swamp within a large depression. The land east of the ditch was disturbed/filled in 1995 through 2005 and the land west of the ditch was disturbed/filled in 2005 based on aerial photograph review. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

The primary hydrology indicators that were observed in Wetland 5 includes high water table (A2) and saturation (A3). The secondary hydrology indicator observed in Wetland 5 include a positive FAC-neutral test (D5). The ditch receives water from the north and there is also a spring or seep located southeast of T5E that adds water to the wetland. The area near T6B is soft and saturated to the surface.

Standing within the ditch of Wetland 5 near sample point T5E facing south.

Standing west of T6A facing north at a waterway created from a seep or spring within Wetland 5.

The dominant hydrophytic vegetation observed:

- *Phalaris arundinacea* (reed canary grass, FACW)
- *Salix nigra* (black willow, OBL)
- *Acer negundo* (boxelder maple, FAC)
- *Rhamnus cathartica* (common buckthorn, FAC)
- *Cornus alba* (red-osier dogwood, FACW)

The soil in Wetland 5 meets hydric soil indicators histosol (A1) and thick dark surface (A12). Hydric soil indicator histosol (A1) was observed by the soil having sixteen inches or more of the upper thirty-two inches from the soil surface being organic soil material. The soils presented thick dark surface (A12) by having a black layer 12 inches or thicker being directly above a depleted or gleyed matrix.

Wetland 6: A degraded wet meadow infested with hybrid cattail located within an excavated roadside ditch and is 449 square feet within the Site Boundary.

Wetland 6 would be considered **E2Kx** (emergent/wet meadow, narrow-leaved persistent with wet soil, palustrine, excavated). The wetland boundary for Wetland 6 is located along a topography break within a roadside ditch. The wet meadow is within an excavated roadside ditch that is located between a road and a cropped field, it may have been rock lined in the past but soil was placed over the rocks. The wetland formed on fill soils that were placed between 1970 and 1980. The wetland meets wetland criteria for hydrophytic vegetation and wetland hydrology.

The primary hydrology indicator that was observed in Wetland 6 includes surface water (A1). The secondary hydrology indicators observed in Wetland 6 include geomorphic position (D2) and a positive FAC-neutral test (D5). The ditch is nearly level, when water is high enough it drains east and some water drains to the south.

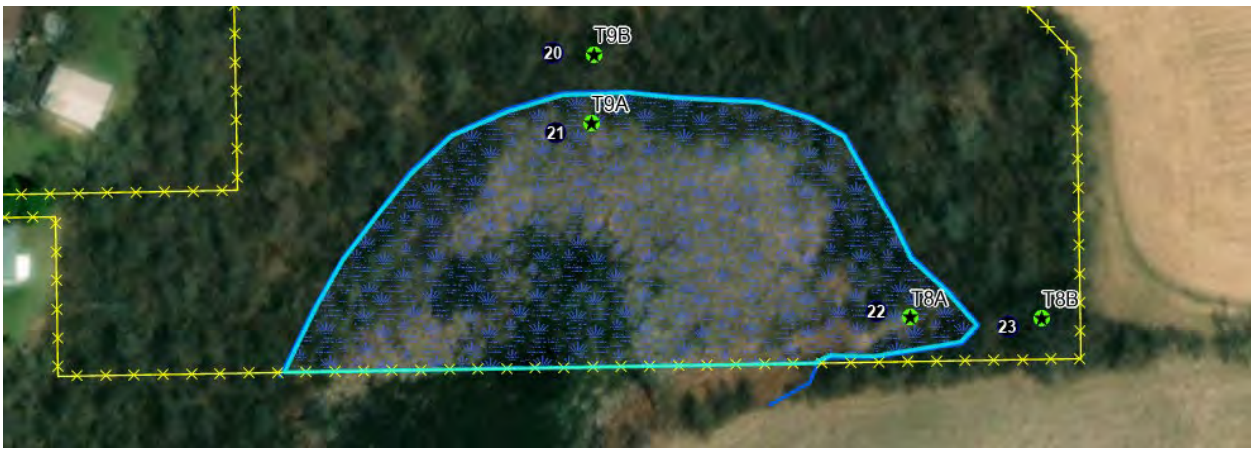
Standing within the excavated ditch infested with cattail.

The dominant hydrophytic vegetation observed:

- *Salix nigra* (black willow, OBL)
- *Typha x glauca* (hybrid cattail, OBL)

The soil in Wetland 6 meets hydric soil indicator redox dark surface (F6). The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick. The area was filled between 1970 and 1980, and a refusal was met on large rocks at fifteen inches from the soil surface.

Wetland 7: A wetland complex in a large, deep depression, and on a shrubby slope down-gradient of a groundwater seep. It consists of a mix of wetland habitat types, sedge meadow, wet meadow, scrub-shrub, and shallow marsh. The sedge meadow and shallow marsh are concentrated mostly in the center of the wetland. A mix of cattail marsh, sedge meadow, wet meadow, and scrub-shrub are in the outer edges of the wetlands. Scrub-shrub habitat is on the eastern slope to a groundwater seep. Much of the wetlands are infested with reed canary grass and hybrid cattail. Wetland 7 is 75,337 square feet within the Site Boundary.



Wetland 7 would be considered **S3/E2K** (Scrub-shrub, broad-leaved deciduous/ Emergent-wet meadow, narrow-leaved persistent with wet soil, palustrine). The wetland boundary for Wetland 7 is located along a topography break within a depression. The wet meadow is within a hardwood forest in a large depression. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

The primary hydrology indicators that were observed in Wetland 7 includes surface water (A1), high water table (A2), and saturation (A3). The secondary hydrology indicator observed in Wetland 7 includes saturation visible on aerial imagery (C9), geomorphic position (D2), shallow aquitard (D3), and a positive FAC-neutral test (D5). Water ponds within the depression and persists for prolonged periods of time.

Photo taken standing within Wetland 7 facing the upland.

The dominant hydrophytic vegetation observed:

- *Phalaris arundinacea* (reed canary grass, FACW)
- *Salix petiolaris* (meadow willow, FACW)
- *Vitis riparia* (riverbank grape, FAC)
- *Impatiens capensis* (orange jewelweed, FACW)
- *Carex lacustris* (lake sedge, OBL)
- *Cornus alba* (red-osier dogwood, FACW)

The soil in Wetland 7 meets hydric soil indicators histosol (A1), black histic (A3), depleted below dark surface (A11), thick dark surface (A12), depleted matrix (F3) and redox dark surface (F6). Hydric soil indicator histosol (A1) was observed by the soil having sixteen inches or more of the upper thirty-two inches from the soil surface being organic soil material. Black histic (A3) was observed by the soil having a layer of muck eight inches or more thick that starts at a depth of six inches from the soil surface being black in color. Depleted below dark surface (A11) was observed by the soils having a depleted layer, starting at least twelve inches from the dark soil surface and being at least six inches thick. The soils presented thick dark surface (A12) by having a black layer 12 inches or thicker being directly above a depleted or gleyed matrix. The soils observed presented a depleted matrix (F3) by having a with sixty percent or more of a depleted matrix color that is six inches thick starting within ten inches of the soil surface; having prominent or distinct redoximorphic features. The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick.

Wetland 8: A degraded shallow marsh infested with hybrid cattail located within an excavated roadside ditch and is 3,579 square feet within the Site Boundary.

Wetland 8 would be considered **E2Kx** (emergent/wet meadow, narrow-leaved persistent with wet soil, palustrine, excavated). The wetland boundary for Wetland 8 is located along a topography break within a roadside ditch. The wet meadow is within an excavated roadside ditch that was constructed in 2005 during a business park development. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

The primary hydrology indicator that was observed in Wetland 8 includes surface water (A1). The secondary hydrology indicators observed in Wetland 8 include geomorphic position (D2) and a positive FAC-neutral test (D5). The roadside ditch is flat, water is perched on a silty clay loam soil and persists for prolonged periods of time.

Excavated roadside ditch infested with cattail.

The dominant hydrophytic vegetation observed:

- *Solanum dulcamara* (climbing nightshade, FAC)
- *Typha x glauca* (hybrid cattail, OBL)
- *Salix nigra* (black willow, OBL)

The soil in Wetland 8 meets hydric soil indicator redox dark surface (F6). The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick.

Wetland 9: A degraded mixture of wet meadow and shallow marsh infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 193 square feet within the Site Boundary.

Wetland 9 would be considered **E2Kx** (emergent/wet meadow, narrow-leaved persistent with wet soil, palustrine, excavated). The wetland boundary for Wetland 9 is located along a topography break within a ditch. The wet meadow is within an excavated ditch that was constructed in 2005 during a business park development. The wetland is a flat area within the ditch and water would persist here for prolonged periods of time. The wetland meets wetland criteria for hydrophytic vegetation, hydric soil, and wetland hydrology.

No primary hydrology indicators were observed in Wetland 9. The secondary hydrology indicators observed in Wetland 9 include geomorphic position (D2) and a positive FAC-neutral test (D5). The roadside ditch is flat, and water persists here for prolonged periods of time.

Standing within the excavated ditch infested with cattail and reed canary grass.

Standing south of the ditch/Wetland 9 at the edge, facing west.

The dominant hydrophytic vegetation observed:

- *Phalaris arundinacea* (reed canary grass, FACW)
- *Typha x glauca* (hybrid cattail, OBL)

The soil in Wetland 9 meets hydric soil indicator redox dark surface (F6). The soils observed presented redox dark surface (F6), with a dark surface with prominent or distinct redoximorphic features within a layer at least four inches thick.

Upland: Upland within the Site is cropland, grassed swales, grassed buffers, and a forest. The crop fields have been planted to corn and hay. The swales are grassed and well-drained, convey stormwater from roadside ditches to a stormwater pond. The grass buffer is located between a crop field and a stormwater basin. Some of the Site was filled/graded during development of the Endeavor Business Park.

Upland planted to corn.

Upland grass meadow

Upland hay field.

Upland forest.

grassed buffer between cropped field and stormwater basin.

4.1 Hydrology Assessments with Aerial Photographs

Aerial photographs from 1937, 1941, 1950, 1963, 1970, 1979-2002, 2005, 2010, 2013, 2015, and 2017 were reviewed. Most of the Site had been cultivated prior to 1937 and until between 2002 and 2005 when the area was developed into a business park. After the construction of the business park some of the Site is still vacant cropland.

A hydrology assessment was completed as the Site had been mostly cropland since prior to 1937. Between 2002 and 2005 the Site had utilities installed and roads constructed throughout it. Based on the review, one area was required to be reviewed.

Review Areas

2002	FSA	N	NV	NV	NV	NV	NV	NV	NV	
		Utilities, roads, and ditches were constructed throughout the site.								
2005	Washington Co.	N	NSS	SS	NSS	DISTURBED	NSS	NV	NV	
2006	Google Earth	N	NSS	CS	NV/NSS	DISTURBED	CS	NV	NV	
2007	Google Earth	N	NV	AP	NV	NV	NV	NV	CS	
2008	Google Earth	W	NV	CS	CS	CS	SS	CS	CS	
2010	Google Earth	N	NV	NV	NV	NV	NSS	NSS	NSS	
2011	Google Earth	W	NSS	CS	NSS/NV	NV	CS	NV	NV	
2013	Google Earth	W	NSS	SS	SS	NV	NSS	NSS	NSS	
2015	Washington Co.	W	NV	CS	CS	NV	NV	NV	NV	
2017	Google Earth	W	CS	CS	CS	NV	CS	CS	NV	
2018	Google Earth	W	NV	SS	CS	NV	CS	NV	NV	
Summary Table			A	B	C	D	E	F	G	H
# Normal Yrs.			21	21	21	19	21	21	21	
# Normal Yrs. With wet signature			1	8	3	2	4	2	4	
% Normal Yrs. With wet signature			5%	38%	14%	11%	19%	10%	19%	

Assessment Results

Area	Hydric Soils Present	Identified on NWI or other wetland map	Percent with wet signatures from Exhibit 1	Other hydrology indicators present (*1)	Wetland?
A	NO	NO	5%	NO	NO
B	YES	NO	38%	YES	YES
C	YES	NO	14%	NO	NO
D	YES	NO	11%	NO	NO
E	YES	NO	19%	NO	NO
F	YES	NO	10%	NO	NO
G	YES	NO	19%	NO	NO

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

Assessment Analysis

4.2 Rare Species and Natural Communities

No species or communities of concern were observed during site activities.

4.3 Mapping

The wetland boundaries were flagged with pink flags. Benjamin La Count, a Professional Land Surveyor, surveyed the wetland boundary. The surveyed wetland boundaries are shown on the Wetland Delineation Map located in Appendix A, Site Maps.

5.0 CONCLUSIONS

Investigation of the area determined that wetlands exist as shown on the attached figures and Wetland Delineation Map. The wetlands identified for this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers, state regulation under the jurisdiction of Wisconsin DNR, and local jurisdiction under Washington County, and the Village of Richfield.

Nine wetland areas were identified during fieldwork:

- Wetland 1 is a degraded wet meadow infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 732 square feet within the Site Boundary.
- Wetlands 2 and 3 are degraded wet meadows infested with reed canary grass and hybrid cattail located within an excavated roadside ditch that is separated by a farm drive, connected via a culvert underneath the driveway. Wetland 2 is 2,020 square feet and Wetland 3 is 791 square feet within the Site Boundary.
- Wetland 4 is a wet meadow colonized by weedy hydrophytic species, located within a depression in a field and is 3,641 square feet.
- Wetland 5 consists of a mix of wetland habitat types, wet meadow, and hardwood swamp. The wet meadow is in the western one-third of the wetland. It is infested with reed canary grass. The eastern two-thirds are hardwood swamp with muck soils that is dominated by willow and box elder and is infested by buckthorn and reed canary grass. The entire wetlands are in a depression and are 18,177 square feet within the Site Boundary.
- Wetland 6 is a degraded wet meadow infested with hybrid cattail located within an excavated roadside ditch and is 449 square feet within the Site Boundary.
- Wetland 7 is a complex in a large, deep depression, and on a shrubby slope down-gradient of a groundwater seep. It consists of a mix of wetland habitat types, sedge meadow, wet meadow, scrub-shrub, and shallow marsh. The sedge meadow and shallow marsh are concentrated mostly in the center of the wetland. A mix of cattail marsh, sedge meadow, wet meadow, and scrub-shrub are in the outer edges of the wetlands. Scrub-shrub habitat is on the eastern slope to a

groundwater seep. Much of the wetlands are infested with reed canary grass and hybrid cattail. Wetland 7 is 75,337 square feet within the Site Boundary.

- Wetland 8 is degraded shallow marsh infested with hybrid cattail located within an excavated roadside ditch and is 3,579 square feet within the Site Boundary.
- Wetland 9 is a degraded mixture of wet meadow and shallow marsh infested with hybrid cattail and reed canary grass located within an excavated roadside ditch and is 193 square feet within the Site Boundary.

It is our opinion that Wetlands 1, 2, 3, 6, 8, and 9 may meet the definition of artificial wetlands as defined in WI Statute 281.36 (4n)(a)1. These wetlands are located within excavated roadside ditches constructed during the development of the Endeavor Business Park between 2005 and 2007.

It is also our opinion that Wetlands 1, 2, 3, 4, 6, 8, and 9 are not "Water of the United States" (WOUS) as defined in the Code of Federal Regulations 40 CFR 328.3. Wetlands 1, 2, 3, 6, 8, and 9 would be considered (b)(10) stormwater control features and Wetland 4 would be considered an (b)(1) non-adjacent waters.

Wetland 1, 2, 3, 4, 6, 8, and 9 may meet the definition of an exempt non-federal wetlands as defined in Wisconsin Statute 281.36(4n)5(b). If a discharge into the Wetlands is necessary for a project a notification must be given to the Wisconsin DNR Wetland ID Program and the local DNR Water Management Specialist and an Approved Jurisdictional Determination must be received from the US Army Corps of Engineers (USACE) prior to commencement of the project or a wetland general permit application could be submitted.

6.0 DISCLAIMER

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

Benjamin J LaCount is a WDNR Professionally Assured Wetland Delineator and WDNR concurrence is granted for five years and some wetlands on-site may have concurrence for 15 years if the conditions of WI Statute 23.321 (5)(b) 1 apply. For wetlands to be confirmed as exempt from state regulatory authority an exemption determination application must be submitted to the DNR Wetland ID Program whose staff makes the final decision.

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Appendix A:

Site Maps

Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Topographic Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 500 1,000 2,000 Feet

N
W E
S

Legend

Site Boundary

County of Washington, Esri, HERE, Garmin, INCREMENT P, NGA, USGS

evergreen consultants LLC
2918 Van Hoof Road • Green Bay, WI 54313
Phone: 920.615.0019 • Website: www.evergreenwis.com

Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Village of Richfield
Washington County, WI
- OVERALL -

Project: WSH20-013-01

0 120 240 480
Feet

N
W E
S

Legend

- Site Boundary
- Wetland Line
- Wetland
- Parcels
- Catch Basin
- Culvert

Wetland Delineation was conducted by Benjamin LaCount, PLS, Wetland Scientist, WDNR Professionally Assured Wetland Delineator with assistance from Shyann Banker, Environmental Specialist

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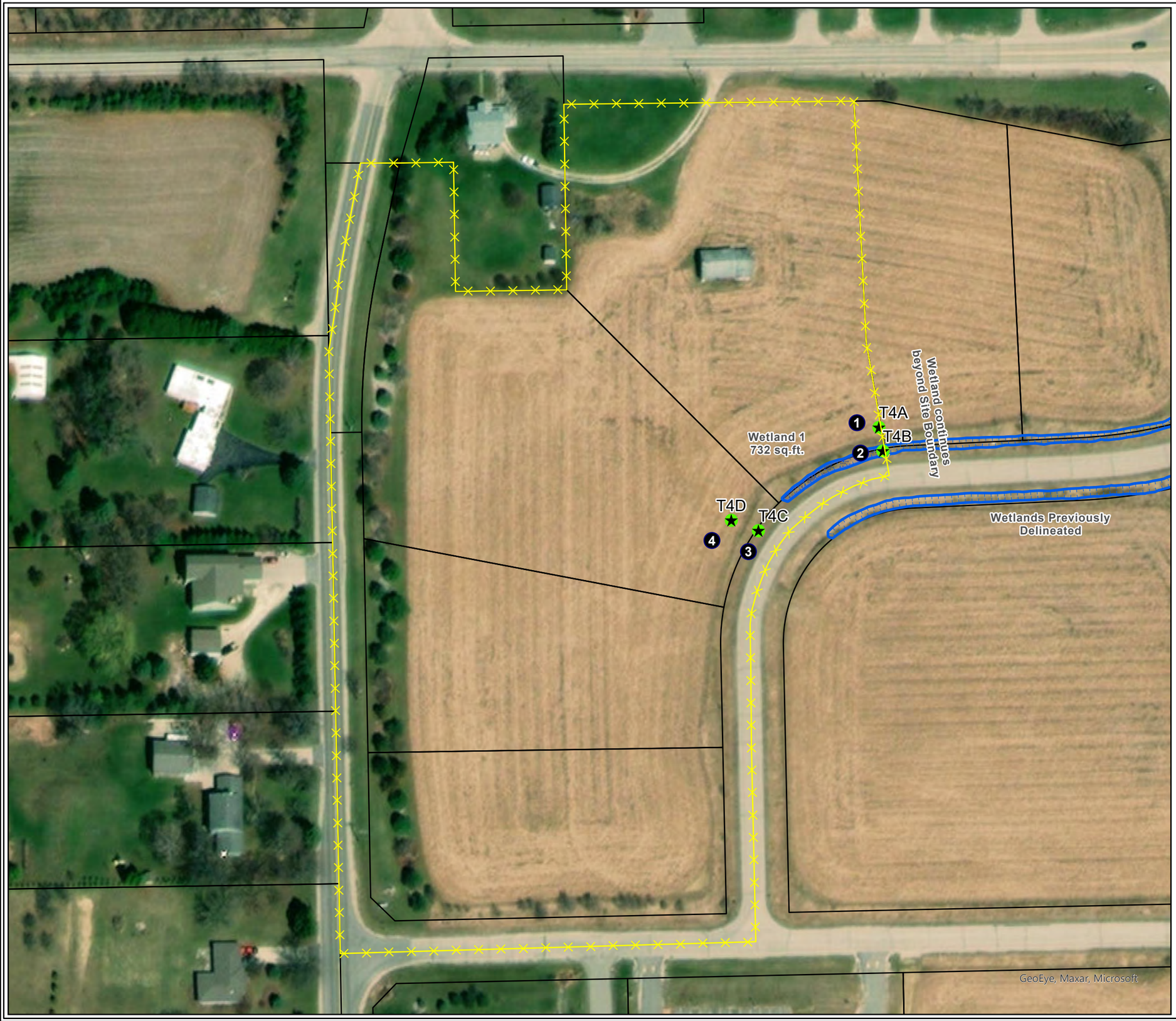
Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Village of Richfield
Washington County, WI
- SHEET 1 -

Project: WSH20-013-01

0 50 100 200
Feet

N
W E
S



Legend

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

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Village of Richfield
Washington County, WI
- SHEET 2 -

Project: WSH20-013-01

0 40 80 160 Feet

N
W E
S

Legend

- Site Boundary
- Sample Point
- Wetland Line
- Wetland
- Picture Location
- Parcels
- Catch Basin
- Culvert

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Village of Richfield
Washington County, WI
- SHEET 3 -

Project: WSH20-013-01

0 50 100 200
Feet

N
W E
S

Legend

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

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Village of Richfield
Washington County, WI
- SHEET 4 -

Project: WSH20-013-01

0 70 140 280
Feet

N
W E
S

Legend

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

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
WDNR Protective Areas
Village of Richfield
Washington County, WI
- OVERALL -

Project: WSH20-013-01

0 120 240 480 Feet

SHEET 1

SHEET 2

SHEET 3

SHEET 4

GeoEye, Maxar, Microsoft

N

W E

S

Legend

- Site Boundary
- Wetland Line
- Wetland
- Parcels
- Catch Basin
- Culvert

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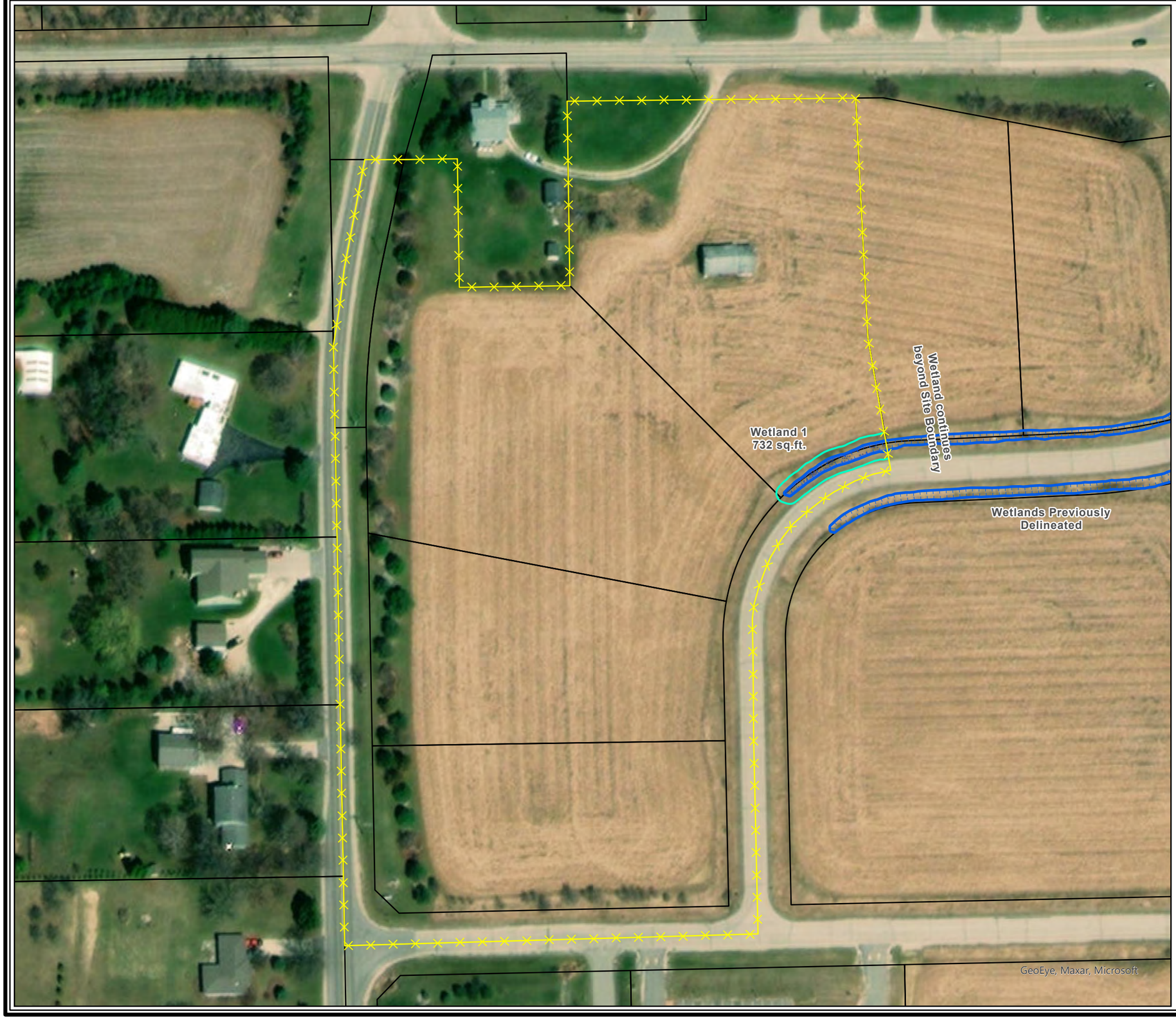
Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
WDNR Protective Areas
Village of Richfield
Washington County, WI
- SHEET 1 -

Project: WSH20-013-01



0 50 100 200 Feet

N
W E
S

Legend

- Site Boundary
- Wetland Line
- Wetland
- Parcels

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
WDNR Protective Areas
Village of Richfield
Washington County, WI
- SHEET 2 -

Project: WSH20-013-01

0 40 80 160 Feet

N
W E
S

Legend

- Site Boundary
- Wetland Line
- Wetland
- Parcels
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- Culvert

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
WDNR Protective Areas
Village of Richfield
Washington County, WI
- SHEET 3 -

Project: WSH20-013-01

0 50 100 200 Feet

N
W E
S

Legend
- Site Boundary
- Wetland Line
- Wetland
- Parcels

Wetland 7
75,337 sq.ft.

Wetland continues beyond Site Boundary

GeoEye, Maxar, Microsoft

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
WDNR Protective Areas
Village of Richfield
Washington County, WI
- SHEET 4 -

Project: WSH20-013-01

0 70 140 280 Feet

N
W E
S

Legend

- Site Boundary
- Wetland Line
- Wetland
- Parcels

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Wetland continues beyond Site Boundary

Wetland 9
193 sq.ft.

Wetlands Previously Delineated

Wetland continues beyond Site Boundary

Wetland 8
3,579 sq.ft.

Wetland continues beyond Site Boundary

Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Potentially Exempt Wetlands
Village of Richfield
Washington County, WI
- OVERALL -

Project: WSH20-013-01

0 120 240 480
Feet

SHEET 1

SHEET 2

SHEET 3

SHEET 4

GeoEye, Maxar, Microsoft

N
W E
S

Legend

- Site Boundary
- Wetland Line
- Wetland
- Potentially Exempt Wetland
- Parcels
- Catch Basin
- Culvert

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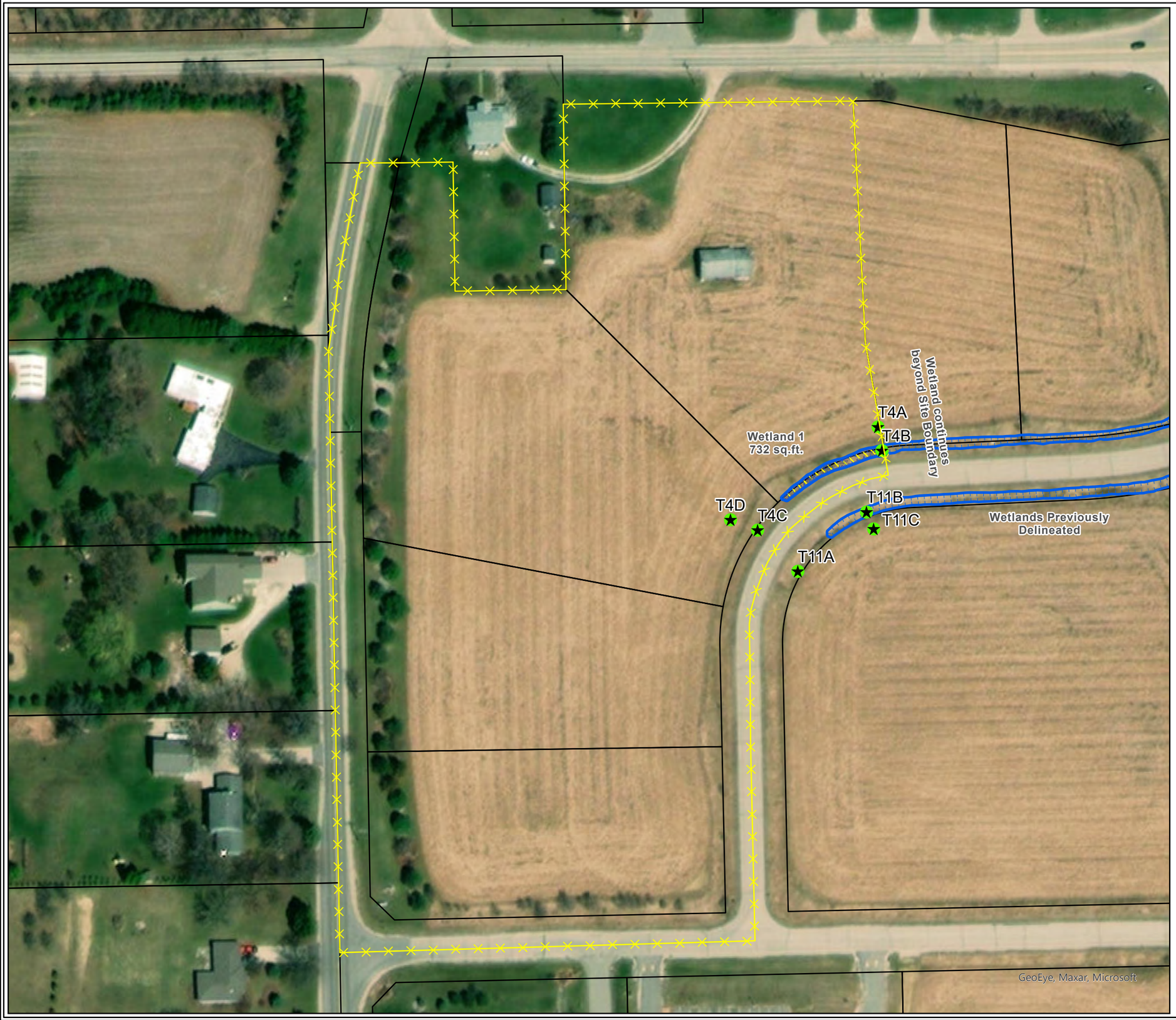
Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Potentially Exempt Wetlands
Village of Richfield
Washington County, WI
- SHEET 1 -

Project: WSH20-013-01

0 50 100 200 Feet



N
W E
S

Legend

- Site Boundary
- Sample Point
- Wetland Line
- Wetland
- Potentially Exempt Wetland
- Parcels

Wetland Delineation was conducted by
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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Potentially Exempt Wetlands
Village of Richfield
Washington County, WI
- SHEET 2 -

Project: WSH20-013-01

0 40 80 160 Feet

Wetland continues beyond Site Boundary
T7A
T7B
Wetland 6
449 sq.ft.
T5F
T6C
T6B
Wetland continues beyond Site Boundary
Wetland 5
18,177 sq.ft.
T5E
Wetland 2
2,020 sq.ft.
T5D
T6A
T13A
Wetland 3
791 sq.ft.
T5A
T5B
T5C
Wetland 4
3,641 sq.ft.
Wetlands Previously Delineated
Wetland continues beyond Site Boundary
GeoEye, Maxar, Microsoft

N
W E
S

Legend

- Site Boundary
- Sample Point
- Wetland Line
- Wetland
- Potentially Exempt Wetland
- Parcels
- Catch Basin
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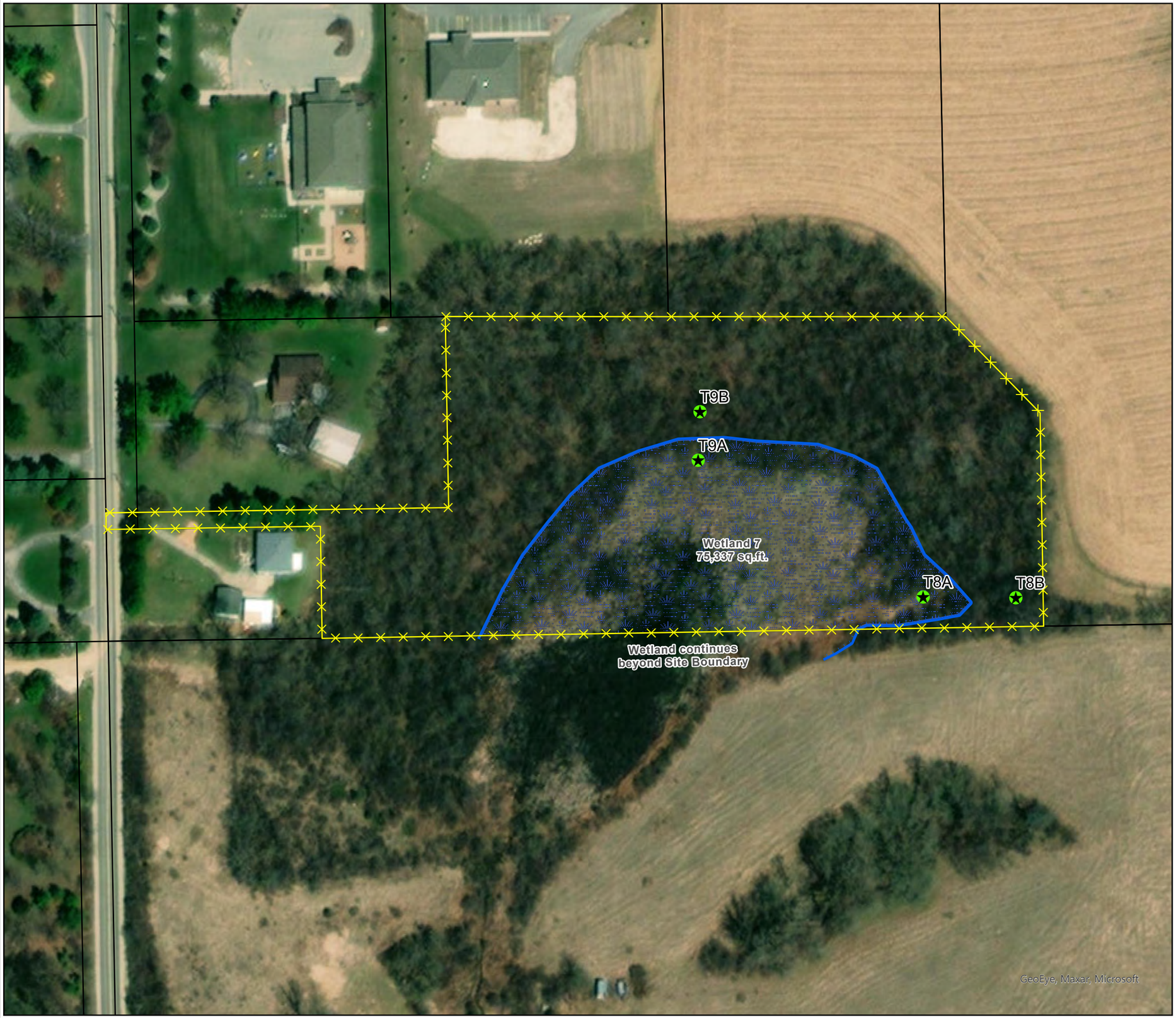
Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Potentially Exempt Wetlands
Village of Richfield
Washington County, WI
- SHEET 3 -

Project: WSH20-013-01



0 50 100 200 Feet

N
W E
S

Legend

- Site Boundary
- Sample Point
- Wetland Line
- Wetland
- Parcels

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Wetland Delineation Map
Potentially Exempt Wetlands
Village of Richfield
Washington County, WI
- SHEET 4 -

Project: WSH20-013-01

0 70 140 280 Feet

N
W E
S

Legend

- Site Boundary
- Sample Point
- Wetland Line
- Wetland
- Potentially Exempt Wetland
- Parcels

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Topographic Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 115 230 460
Feet

N
W E
S

Legend

- Site Boundary
- Parcels

GeoEye, Maxar, Microsoft

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Surface Water Data Viewer Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 125 250 500 Feet

N
W E
S

Legend

- Site Boundary
- Parcels

Wetland Indicators

- USDA Wetspots
- Maximum Extent Wetland Indicators

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
National Wetland Inventory Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 125 250 500 Feet

N
W E
S

Legend

- Site Boundary
- Parcels
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
NRCS Hydric Rating Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 125 250 500 Feet

N
W E
S

Legend

- Site Boundary
- Parcels
- Hydric
- Predominantly Hydric
- Partially Hydric
- Predominantly Non-Hydric

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
NRCS Soils Map Units
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 125 250 500 Feet

N
W E
S

Legend

- Site Boundary
- Parcels
- USA Soils Map Units

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Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Quadrangle Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

0 300 600 1,200 Feet

N
W E
S

Legend

Site Boundary

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Appendix B:

Site Pictures

1- Standing near T4A.

2- Standing near T4B.

3- Standing near T4C.

4- Standing near T4D.

5- Standing at the entrance north of T5A.

6- Standing near T5A.

7- Standing near T5B.

8- Standing near T5C.

9- Standing near the middle of the field.

10- Standing near T5D.

11- Standing near T5E.

12- Standing near T5F.

13- Standing between T5F and T6C.

14- Standing near T6C.

15- Standing near T6B.

16- Standing near T6A.

17- Standing at the crossing south of T7A.

18- Standing near T7B.

19- Standing near T7A.

20- Standing near T9B.

21- Standing near T9A.

22- Standing near T8A.

23- Standing near T8B.

24- Standing near T1A.

25- Standing near T1B.

26- Standing near T1C.

27- Standing near T1D.

28- Standing near T1E.

29- Standing near T2A.

30- Standing between T2A and T2B.

31- Standing near T2B.

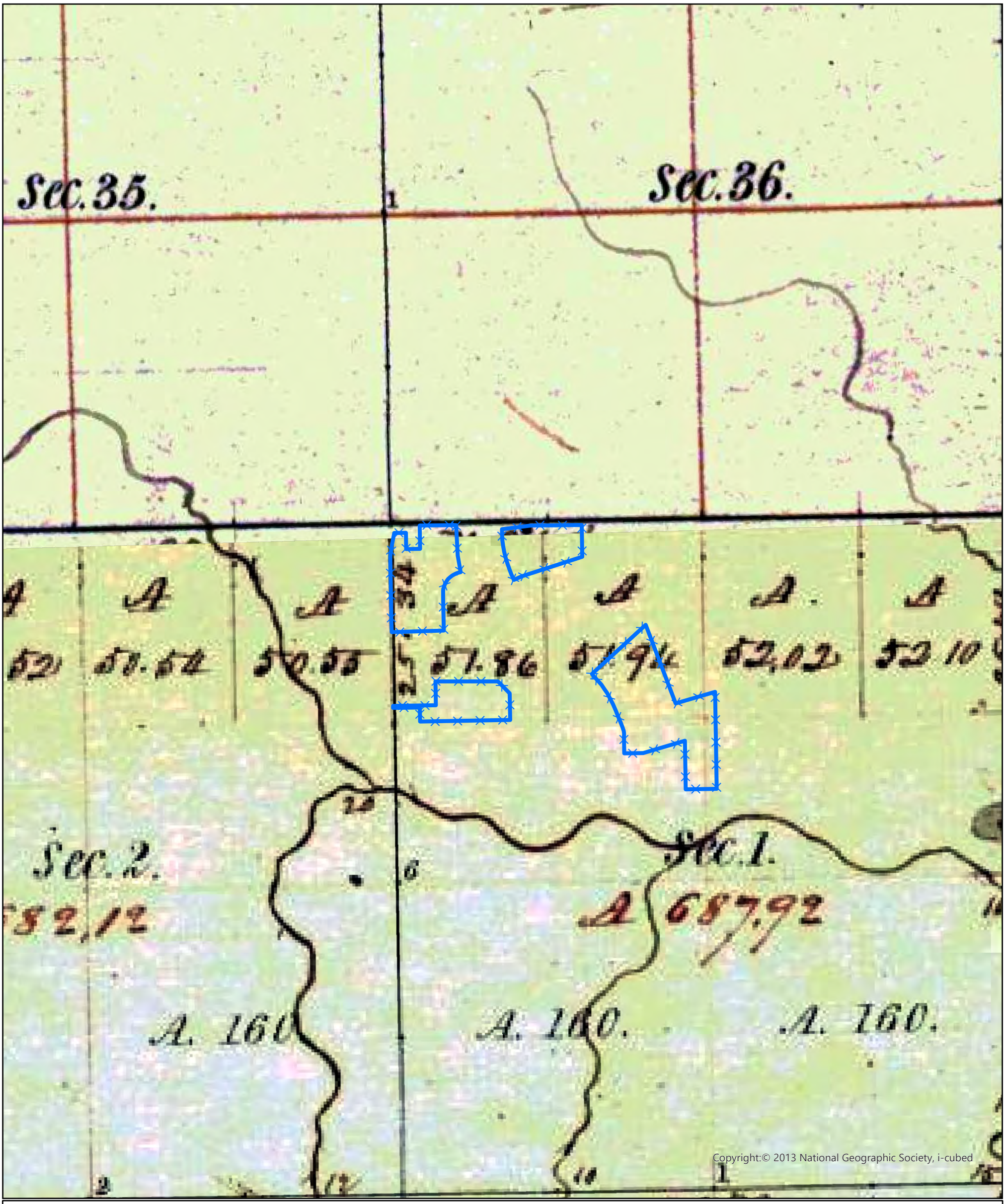
32- Standing near T3A.

33- Standing near T3B.

34- Standing near T3C.

Appendix C:

Original Survey, Notes, and Bordner Map



Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 & Outlot 1
Original Survey Map
Village of Richfield
Washington County, WI

Project: WSH20-013-01

Legend

Site Boundary

N
W
E
S

0 400 800 1,600 Feet

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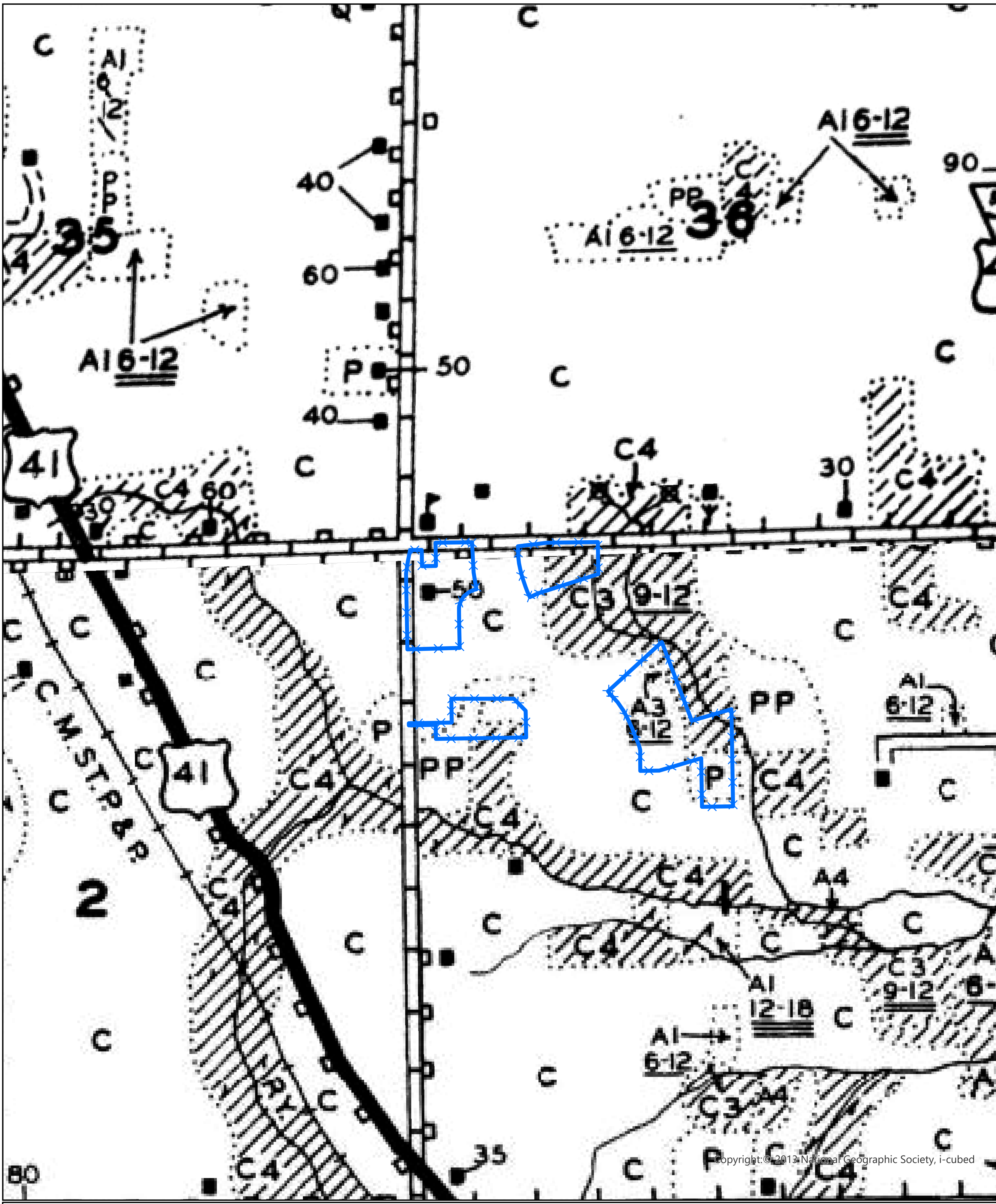
41 South Boundary 7

Township No. 10 North.

Var 6° 40'

West	On South Side Section 36
10.00	Brook 7 ch S. E
12.61	Lynn 8
35.87	Beech 18
40.00	Set quarter Section post
	Beech 12 N 34 W 33
	Do 22 N 26 E 44
76.27	Sugar 8
80.00	Set post cor Sects 35 & 36
	Beech 8 N 44 W 27
	Do 10 N 42 E 64
	Land gently rolling first rate Sugar Beech Lynn Ironwood &c

Original Survey Notes



Endeavor Business Park
Lots 3, 4, 5, 6, 13, 16, 22, 24 &
Outlot 1
Bordner Map
Village of Richfield
Washingtown County, WI

Project: WSH20-013-01

Legend

Site Boundary

0 400 800 1,600 Feet

N W E S

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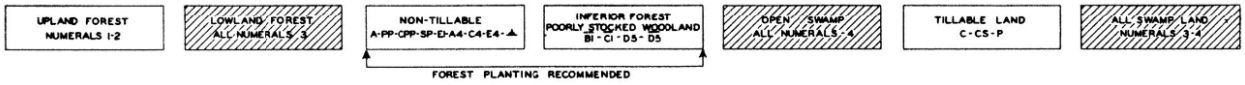
LEGEND



LAND COVER

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

ROADS

14 FEDERAL HIGHWAY 9 STATE HIGHWAY A COUNTY HIGHWAY

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

IMPROVEMENTS

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

MISCELLANEOUS SYMBOLS

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

WOODED AREAS

DENSITY OF STAND

IS INDICATED BY THE LINE OR LINES BELOW THE DIAMETER

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

DIAMETER CLASSES

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

ONE MILE

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

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

Appendix D:

Historic Aerial Photographs and Hydrology Assessment

Site Boundary

Hydrology Assessment with Aerial Imagery - Recording Form										
Project Name: WSH20-013-01			Date: 10/04/2020			County: Washington				
Investigator: Ben LaCount			Legal Description (Sec, T, R): Section 1, T9N-R19E							
Year	**Image Source**	**Climate Condition** (wet, dry, normal)	**Interpretation (List hydrology indicators observed, e.g. crop stress, drowned out, standing water, etc.)**							
			A	B	C	D	E	F	G	H
1941	Washington Co.	NO DATA	NV	SS	SS	NV	NSS	NSS	NSS	
1950	Washington Co.	N	NV	SS	NSS	NV	NV	NV	NV	
1963	Washington Co.	N	NV	SS	SS	SS	SS	NV	NV	
1970	Washington Co.	N	NSS	SS	NSS	NSS	NSS	NSS	NSS	
1979	FSA	N	NV	NV	NV	NV	NV	NV	CS	
1980	FSA	N	SS	SS	SS	NSS	NSS	NSS	SS	
1981	FSA	N	NV	NV	NV	NV	NSS	NV	NV	
1982	FSA	N	NSS/NV	NS	NV	NSS	NSS	AP	NV	
1983	FSA	N	NV	NV/NSS	AP	NV	NV	NSS	SS	
1984	FSA	W	NV	NV/NSS	NV	NV	CS	CS	CS	
1985	Washington Co.	D	NV	NV/NSS	NV	NSS	SS	SS	NSS	
1986	FSA	N	NV/NSS	NSS/NV	NSS	NSS	NV	SS	NSS	
1987	FSA	D	NSS/NV	NV	NV	NV	NV	NV	NV	
1988	FSA	D	CS	CS	CS	NV	SS	CS	NV	
1989	FSA	N	NSS/NV	NSS/NV	NSS	NSS	NSS	NSS	NSS	
1990	Washington Co.	N	NV	NV	NV	NV	NV	NV	NV	
1991	FSA	N	NV	NV	NV	NV	CS	NV	NV	
1992	FSA	D	NV	NV	NV	NV	CS	NV	NV	
1993	FSA	W	CS	NV	NV	NV	NV	NV	NV	
1994	FSA	N	NV	NV/NSS	NV	AP	AP	NV	NV	
1995	FSA	D	NV	NV	NV	NV	NV	NV	NV	
1996	FSA	W	NSS/NV	NSS	NSS	NV	AP	NV	NV	
1997	FSA	N	NSS/NV	NV/NSS	NV	NV	NV	NV	NV	
1998	FSA	N	NSS/NV	NV/NSS	NV	NSS	NV	NV	NV	
1999	FSA	W	AP	AP	CS	CS	CS	NV	NV	
2000	Washington Co.	W	NSS/NV	NV/NSS	CS	NSS	NSS	NSS	NSS	
2001	FSA	N	NV	CS	NV	NV	NV	NV	NV	
2002	FSA	N	NV	NV	NV	NV	NV	NV	NV	
		Utilities, roads, and ditches were constructed throughout the site.								
2005	Washington Co.	N	NSS	SS	NSS	DISTURBED	NSS	NV	NV	
2006	Google Earth	N	NSS	CS	NV/NSS	DISTURBED	CS	NV	NV	
2007	Google Earth	N	NV	AP	NV	NV	NV	NV	CS	
2008	Google Earth	W	NV	CS	CS	CS	SS	CS	CS	
2010	Google Earth	N	NV	NV	NV	NV	NSS	NSS	NSS	
2011	Google Earth	W	NSS	CS	NSS/NV	NV	CS	NV	NV	
2013	Google Earth	W	NSS	SS	SS	NV	NSS	NSS	NSS	
2015	Washington Co.	W	NV	CS	CS	NV	NV	NV	NV	
2017	Google Earth	W	CS	CS	CS	NV	CS	CS	NV	
2018	Google Earth	W	NV	SS	CS	NV	CS	NV	NV	
Summary Table			**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
# Normal Yrs.			21	21	21	19	21	21	21	
# Normal Yrs. With wet signature			1	8	3	2	4	2	4	
% Normal Yrs. With wet signature			5%	38%	14%	11%	19%	10%	19%	

*Use key below to label photo interpretations. It is imperative that the reviewer read and understand the guidace associated with the used of these labels if alternamte labels are used, indicate in box below

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

Field data sheet reference (if applicable):	

Wetland Determination from Aerial Imagery – Recording Form

Project Name:	WSH20-013-01
Investigator:	Ben LaCount
County:	Washington

Date:	10/4/2020
Legal Description (S, T, R):	Section 1, T9N-R19E

Use the Decision Matrix below to complete Table 1.

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

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

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

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

Table 1

Area	Hydric Soils Present	Identified on NWI or other wetland map	Percent with wet signatures from Exhibit 1	Other hydrology indicators present (*1)	Wetland?
A	NO	NO	5%	NO	NO
B	YES	NO	38%	YES	YES
C	YES	NO	14%	NO	NO
D	YES	NO	11%	NO	NO
E	YES	NO	19%	NO	NO
F	YES	NO	10%	NO	NO
G	YES	NO	19%	NO	NO

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

1937 Aerial Photo

1941 Aerial Photo

1950 Aerial Photo

1963 Aerial Photo

1970 Aerial Photo

1979 Aerial Photo

1980 Aerial Photo

1981 Aerial Photo

1982 Aerial Photo

1983 Aerial Photo

1984 Aerial Photo

1985 Aerial Photo

1986 Aerial Photo

1987 Aerial Photo

1988 Aerial Photo

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1998 Aerial Photo

1999 Aerial Photo

2000 Aerial Photo

2001 Aerial Photo

2002 Aerial Photo

2005 Aerial Photo

2006 Aerial Photo

2007 Aerial Photo

2008 Aerial Photo

2010 Aerial Photo

2011 Aerial Photo

2013 Aerial Photo

2015 Aerial Photo

2017 Aerial Photo

2018 Aerial Photo

Appendix E:

NRCS County Soil Survey Report

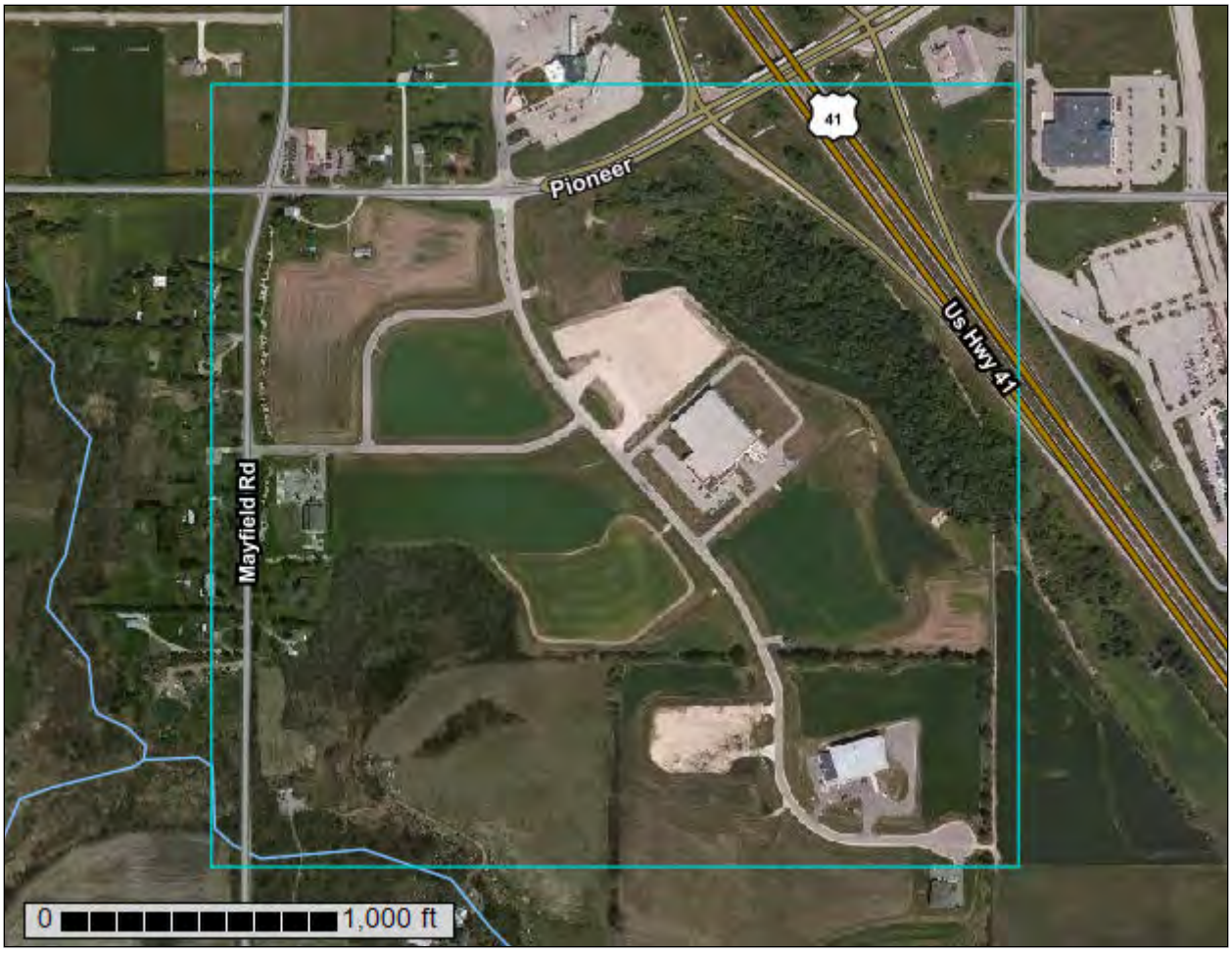
United States Department of Agriculture

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 Washington County, Wisconsin



November 16, 2020

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 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Washington County, Wisconsin
Survey Area Data: Version 20, Jun 8, 2020

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Am	Alluvial land	0.0	0.0%
AtA	Ashkum silty clay loam, 0 to 2 percent slopes	27.8	14.6%
FsB	Fox silt loam, 2 to 6 percent slopes	1.7	0.9%
HmB	Hochheim loam, 2 to 6 percent slopes	3.9	2.0%
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	0.6	0.3%
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	1.0	0.5%
HoC3	Hochheim soils, 6 to 12 percent slopes, severely eroded	1.5	0.8%
JuA	Juneau silt loam, 1 to 3 percent slopes	1.0	0.5%
LmA	Lamartine silt loam, 0 to 3 percent slopes	0.7	0.4%
MoB	Mayville silt loam, 2 to 6 percent slopes	2.4	1.3%
MtA	Mequon silt loam, 1 to 3 percent slopes	39.1	20.5%
OuB	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes	5.9	3.1%
OuB2	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded	18.4	9.6%
OuC2	Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded	8.4	4.4%
OuD2	Ozaukee silt loam, high carbonate substratum, 12 to 20 percent slopes, eroded	7.5	3.9%
Pc	Palms mucky peat, 0 to 2 percent slopes	1.1	0.6%
Ph	Pella silt loam, 0 to 2 percent slopes	4.4	2.3%
RaA	Radford silt loam, 0 to 3 percent slopes	10.4	5.5%
ShB	Saylesville silt loam, 2 to 6 percent slopes	0.7	0.4%
Sm	Sebewa silt loam, 0 to 2 percent slopes	1.1	0.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SvB2	Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded	28.0	14.7%
SvC2	Sisson-Casco-Hochheim complex, 6 to 12 percent slopes, eroded	10.6	5.6%
ThB2	Theresa silt loam, 2 to 6 percent slopes, eroded	2.9	1.5%
Ww	Wet alluvial land	3.6	1.9%
ZuC2	Zurich silt loam, 6 to 12 percent slopes, eroded	8.2	4.3%
Totals for Area of Interest		**191.1**	**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.

Washington County, Wisconsin

Am—Alluvial land

Map Unit Setting

National map unit symbol: g8z1
Elevation: 790 to 1,280 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Alluvial land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alluvial Land

Setting

Landform: Alluvial flats
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and silty alluvium

Typical profile

A - 0 to 5 inches: loam
C - 5 to 60 inches: stratified sand to silt

Properties and qualities

Slope: 0 to 2 percent
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: RareOccasionalFrequentVery rare
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 20 percent
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Wet alluvial land

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip

Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

AtA—Ashkum silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ssrw
Elevation: 520 to 930 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 160 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Ashkum, drained, and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ashkum, Drained

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Clayey colluvium over till

Typical profile

Ap - 0 to 12 inches: silty clay loam
Bg1 - 12 to 29 inches: silty clay
2Bg2 - 29 to 54 inches: silty clay loam
2Cg - 54 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Minor Components

Peotone, drained
Percent of map unit: 5 percent
Landform: Depressions on ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Orthents, clayey
Percent of map unit: 2 percent
Landform: Lake plains, ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Urban land
Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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
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 content: 45 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
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

HmB—Hochheim loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2t03x
Elevation: 820 to 1,330 feet
Mean annual precipitation: 29 to 31 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 155 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Hochheim

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 9 inches: loam
Bt - 9 to 17 inches: clay loam
C - 17 to 33 inches: gravelly loam
Cd - 33 to 79 inches: gravelly loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)

Hydric soil rating: No

Minor Components

Theresa

Percent of map unit: 7 percent
Landform: Drumlins
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lamartine

Percent of map unit: 3 percent
Landform: Drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

HmB2—Hochheim loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t03w
Elevation: 820 to 1,330 feet
Mean annual precipitation: 29 to 36 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 16 inches: loam
C - 16 to 33 inches: gravelly sandy loam

Cd - 33 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Theresa, eroded

Percent of map unit: 10 percent
Landform: Till plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Lamartine

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

HmC2—Hochheim loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t03r
Elevation: 900 to 1,340 feet
Mean annual precipitation: 31 to 33 inches
Mean annual air temperature: 43 to 46 degrees F

Frost-free period: 135 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 16 inches: clay loam
C - 16 to 33 inches: gravelly sandy loam
Cd - 33 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Hochheim

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Theresa

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HoC3—Hochheim soils, 6 to 12 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: g90c
Elevation: 790 to 1,310 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hochheim and similar soils: 60 percent
Hochheim and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim

Setting

Landform: Till plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy pedisediment over coarse-loamy till

Typical profile

Ap - 0 to 7 inches: clay loam
Bt - 7 to 16 inches: clay loam
C - 16 to 60 inches: loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water capacity: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Description of Hochheim

Setting

Landform: Till plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy glaciofluvial deposits over coarse-loamy till

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 16 inches: clay loam
C - 16 to 60 inches: loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water capacity: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

JuA—Juneau silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: g90l
Elevation: 790 to 1,310 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F

Frost-free period: 145 to 165 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Juneau and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Juneau

Setting
Landform: Drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty colluvium over fine-silty loess

Typical profile
Ap - 0 to 11 inches: silt loam
C - 11 to 33 inches: silt loam
Ab, Btb - 33 to 47 inches: silt loam
2Btb - 47 to 60 inches: clay loam

Properties and qualities
Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: NoneVery rareOccasionalRare
Frequency of ponding: Rare
Calcium carbonate, maximum content: 20 percent
Available water capacity: High (about 11.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

LmA—Lamartine silt loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2t043
Elevation: 590 to 1,140 feet
Mean annual precipitation: 29 to 35 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Lamartine

Setting

Landform: Interdrumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 20 inches: silty clay loam
2Bt2 - 20 to 28 inches: clay loam
2C - 28 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
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 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Minor Components

Pella

Percent of map unit: 8 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ossian

Percent of map unit: 7 percent

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

MoB—Mayville silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2szfv
Elevation: 830 to 1,120 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 130 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Mayville

Setting

Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 6 inches: silt loam
BE - 6 to 12 inches: silt loam
Bt1 - 12 to 28 inches: silty clay loam
2Bt2 - 28 to 32 inches: clay loam
2C - 32 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 9.7 inches)

Interpretive groups

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

Minor Components

Dodge

Percent of map unit: 8 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Lamartine

Percent of map unit: 2 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

MtA—Mequon silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: g90z
Elevation: 790 to 1,250 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Mequon

Setting

Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam
Btg - 7 to 11 inches: silt loam
2Bt - 11 to 26 inches: silty clay loam
2C - 26 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 40 percent
Available water capacity: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Minor Components

Ashkum

Percent of map unit: 10 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

OuB—Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sn09
Elevation: 650 to 1,010 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 44 to 49 degrees F
Frost-free period: 125 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ozaukee, high carbonate substratum, and similar soils: 96 percent
Minor components: 4 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 8 inches: silt loam
E - 8 to 10 inches: silt loam
Bt1 - 10 to 13 inches: silty clay loam
2Bt2 - 13 to 23 inches: silty clay
2Bt3 - 23 to 29 inches: silty clay loam
2Cd - 29 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 23 to 40 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

Minor Components

Ashkum, drained

Percent of map unit: 2 percent
Landform: Ground moraines, end moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Orthents, clayey

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Urban land

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

OuB2—Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2sn0c
Elevation: 650 to 1,010 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 44 to 49 degrees F
Frost-free period: 125 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ozaukee, high carbonate substratum, eroded, and similar soils: 96 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum, Eroded

Setting

Landform: Ground moraines, end moraines
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 11 inches: silty clay loam
2Bt2 - 11 to 22 inches: silty clay
2Bt3 - 22 to 27 inches: silty clay loam
2Cd - 27 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 22 to 40 inches to densic material
Drainage class: Moderately well drained

Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

Minor Components

Ashkum, drained

Percent of map unit: 2 percent
Landform: Ground moraines, end moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Urban land

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Orthents, clayey

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

OuC2—Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2sn0h
Elevation: 670 to 1,020 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 44 to 49 degrees F
Frost-free period: 125 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ozaukee, high carbonate substratum, eroded, and similar soils: 94 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum, Eroded

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 11 inches: silty clay loam
2Bt2 - 11 to 22 inches: silty clay
2Bt3 - 22 to 27 inches: silty clay loam
2Cd - 27 to 60 inches: silty clay loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 22 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

Minor Components

Ozaukee, severely eroded
Percent of map unit: 2 percent
Landform: End moraines, ground moraines
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

Urban land
Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mequon
Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

OuD2—Ozaukee silt loam, high carbonate substratum, 12 to 20 percent slopes, eroded

Map Unit Setting
National map unit symbol: 2sn0m
Elevation: 660 to 1,020 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 44 to 49 degrees F
Frost-free period: 125 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition
Ozaukee, high carbonate substratum, eroded, and similar soils: 94 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum, Eroded

Setting

Landform: Ground moraines, end moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 11 inches: silty clay loam
2Bt2 - 11 to 22 inches: silty clay
2Bt3 - 22 to 27 inches: silty clay loam
2Cd - 27 to 60 inches: silty clay loam

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 22 to 37 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

Minor Components

Ozaukee, severely eroded

Percent of map unit: 2 percent
Landform: Ground moraines, end moraines
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

Mequon

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear

Across-slope shape: Concave
Hydric soil rating: No

Urban land

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pc—Palms mucky peat, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2szdg
Elevation: 780 to 1,240 feet
Mean annual precipitation: 31 to 33 inches
Mean annual air temperature: 44 to 47 degrees F
Frost-free period: 127 to 178 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Palms, Mucky Peat

Setting

Landform: Interdrumlins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over loamy drift

Typical profile

Oep - 0 to 11 inches: mucky peat
Oe - 11 to 28 inches: mucky peat
2C - 28 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent

Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very high (about 17.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Houghton, mucky peat

Percent of map unit: 7 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Adrian

Percent of map unit: 3 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

Ph—Pella silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t044
Elevation: 590 to 1,100 feet
Mean annual precipitation: 29 to 37 inches
Mean annual air temperature: 43 to 55 degrees F
Frost-free period: 124 to 178 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Pella

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave

Across-slope shape: Concave
Parent material: Silty glaciofluvial deposits over calcareous lacustrine deposits and/or calcareous loamy till

Typical profile

Ap - 0 to 11 inches: silt loam
Bg - 11 to 38 inches: silty clay loam
2Cg - 38 to 79 inches: stratified loamy sand to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very high (about 12.2 inches)

Interpretive groups

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

Minor Components

Kendall

Percent of map unit: 7 percent
Landform: Drainageways
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lamartine

Percent of map unit: 6 percent
Landform: Drainageways
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Palms, muck

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

Hydric soil rating: Yes

RaA—Radford silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wpxr
Elevation: 500 to 1,100 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 140 to 190 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

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

Description of Radford

Setting

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

Typical profile

Ap - 0 to 9 inches: silt loam
C - 9 to 23 inches: silt loam
Ab - 23 to 36 inches: silt loam
Bgb - 36 to 56 inches: silt loam
Cgb - 56 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.43 to 1.98 in/hr)
Depth to water table: About 15 to 30 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very high (about 12.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Minor Components

Otter
Percent of map unit: 4 percent
Landform: Flood plains, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

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

Sebewa
Percent of map unit: 2 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Drummer
Percent of map unit: 1 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

ShB—Saylesville silt loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: g91p
Elevation: 790 to 1,250 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Saylesville

Setting

Landform: Lakebeds (relict)
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-silty lacustrine deposits over clayey lacustrine deposits over silty and clayey lacustrine deposits

Typical profile

Ap, E - 0 to 12 inches: silt loam
Bt - 12 to 26 inches: clay
C - 26 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water capacity: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Sm—Sebewa silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2szfk
Elevation: 780 to 1,140 feet
Mean annual precipitation: 29 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 124 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Sebewa

Setting

Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy outwash over sandy and gravelly outwash

Typical profile

Ap - 0 to 11 inches: silt loam
Btg - 11 to 27 inches: clay loam
2Cg - 27 to 79 inches: coarse sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 24 to 30 inches to strongly contrasting textural stratification
Drainage class: Poorly drained
Runoff class: Negligible
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 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Adrian

Percent of map unit: 6 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

Ionia

Percent of map unit: 3 percent
Landform: Rises
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf

Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Fox

Percent of map unit: 1 percent
Landform: Rises
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F110XY011IL - Dry Glacial Drift Upland Forest
Hydric soil rating: No

SvB2—Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: g91w
Elevation: 790 to 1,310 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sisson and similar soils: 31 percent
Casco and similar soils: 29 percent
Hochheim and similar soils: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sisson

Setting

Landform: Terminal moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope
Parent material: Coarse-loamy lacustrine deposits over fine-loamy lacustrine deposits over coarse-loamy lacustrine deposits

Typical profile

Ap, BE - 0 to 14 inches: silt loam
Bt - 14 to 24 inches: very fine sandy loam
BC, C - 24 to 60 inches: stratified fine sand to silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Description of Casco

Setting

Landform: Terminal moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy glaciofluvial deposits over sandy and gravelly outwash

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 17 inches: clay loam
2C - 17 to 60 inches: Error

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Forage suitability group: Low AWC, adequately drained (G095BY002WI)
Other vegetative classification: Low AWC, adequately drained (G095BY002WI)
Hydric soil rating: No

Description of Hochheim

Setting

Landform: Terminal moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope
Parent material: Fine-loamy pedisediment over coarse-loamy till

Typical profile

Ap - 0 to 7 inches: silt loam

Bt, 2Bt - 7 to 18 inches: clay loam
2C - 18 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

SvC2—Sisson-Casco-Hochheim complex, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: g91x
Elevation: 790 to 1,310 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sisson and similar soils: 31 percent
Casco and similar soils: 29 percent
Hochheim and similar soils: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sisson

Setting

Landform: Terminal moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Parent material: Coarse-loamy lacustrine deposits over fine-loamy lacustrine deposits over coarse-loamy lacustrine deposits

Typical profile

Ap - 0 to 14 inches: loam
Bt - 14 to 24 inches: very fine sandy loam
BC, C - 24 to 60 inches: stratified fine sand to silt loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Description of Casco

Setting

Landform: Terminal moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy glaciofluvial deposits over sandy and gravelly outwash

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 17 inches: clay loam
2c - 17 to 60 inches: Error

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Forage suitability group: Low AWC, adequately drained (G095BY002WI)

Other vegetative classification: Low AWC, adequately drained (G095BY002WI)
Hydric soil rating: No

Description of Hochheim

Setting
Landform: Terminal moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Parent material: Fine-loamy pedisediment over coarse-loamy till

Typical profile
Ap - 0 to 7 inches: loam
Bt, 2Bt - 7 to 18 inches: clay loam
2C - 18 to 60 inches: loam

Properties and qualities
Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

ThB2—Theresa silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting
National map unit symbol: 2szd7
Elevation: 660 to 1,290 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 150 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Theresa, eroded, and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Theresa, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 8 inches: silt loam
BE - 8 to 11 inches: silt loam
Bt1 - 11 to 16 inches: silty clay loam
2Bt2 - 16 to 35 inches: gravelly clay loam
2Cd - 35 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.7 inches)

Interpretive groups

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

Minor Components

Hochheim, eroded

Percent of map unit: 14 percent
Landform: Drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Lamartine

Percent of map unit: 3 percent
Landform: Drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ww—Wet alluvial land

Map Unit Setting

National map unit symbol: g928
Elevation: 760 to 1,310 feet
Mean annual precipitation: 32 to 35 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 145 to 165 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Wet alluvial land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wet Alluvial Land

Setting

Landform: Depressions on alluvial flats, drainageways on alluvial flats, flood plains on alluvial flats
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Sandy and silty alluvium

Typical profile

Ap, A - 0 to 15 inches: loam
BA, BCg - 15 to 35 inches: loam
Cg - 35 to 60 inches: stratified sandy loam to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 8 inches
Frequency of flooding: OccasionalFrequent
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 30 percent
Available water capacity: High (about 11.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Forage suitability group: Frequently flooded, organics (G095BY010WI)
Other vegetative classification: Frequently flooded, organics (G095BY010WI)
Hydric soil rating: Yes

ZuC2—Zurich silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2wsrv
Elevation: 610 to 1,070 feet
Mean annual precipitation: 33 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 124 to 192 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Zurich, Eroded

Setting

Landform: Lakebeds (relict)
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over sandy and silty lacustrine deposits

Typical profile

Ap - 0 to 5 inches: silt loam
BE - 5 to 9 inches: silt loam
Bt - 9 to 23 inches: silty clay loam
2C - 23 to 79 inches: stratified very fine sand to silt loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)

Hydric soil rating: No

Minor Components

Dresden

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Wauconda

Percent of map unit: 3 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Orthents, loamy

Percent of map unit: 2 percent
Landform: Lake plains, outwash plains, lakebeds (relict), ground moraines
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

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

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

Land Classifications

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

Hydric Rating by Map Unit (WI)

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

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

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

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

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

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

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

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

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

References:

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

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

Report—Hydric Rating by Map Unit (WI)

Hydric Rating by Map Unit (WI)–Washington County, Wisconsin				
Map Unit Symbol	**Map Unit Name**	**Hydric Percent of Map Unit**	**Hydric Category**	**Landform Hydric Minor Components**
Am	Alluvial land	10	WI Predominantly Nonhydric	Flood plains
AtA	Ashkum silty clay loam, 0 to 2 percent slopes	97	WI Predominantly Hydric	Ground moraines
FsB	Fox silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
HmB	Hochheim loam, 2 to 6 percent slopes	0	WI Nonhydric	—
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	0	WI Nonhydric	—
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
HoC3	Hochheim soils, 6 to 12 percent slopes, severely eroded	0	WI Nonhydric	—
JuA	Juneau silt loam, 1 to 3 percent slopes	0	WI Nonhydric	—
LmA	Lamartine silt loam, 0 to 3 percent slopes	15	WI Predominantly Nonhydric	Drainageways
MoB	Mayville silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
MtA	Mequon silt loam, 1 to 3 percent slopes	10	WI Predominantly Nonhydric	Depressions
OuB	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes	2	WI Predominantly Nonhydric	Ground moraines
OuB2	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded	2	WI Predominantly Nonhydric	Ground moraines
OuC2	Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
OuD2	Ozaukee silt loam, high carbonate substratum, 12 to 20 percent slopes, eroded	0	WI Nonhydric	—
Pc	Palms mucky peat, 0 to 2 percent slopes	100	WI Hydric	Interdrumlins
Ph	Pella silt loam, 0 to 2 percent slopes	87	WI Predominantly Hydric	Depressions

Hydric Rating by Map Unit (WI)–Washington County, Wisconsin				
Map Unit Symbol	Map Unit Name	Hydric Percent of Map Unit	Hydric Category	Landform Hydric Minor Components
RaA	Radford silt loam, 0 to 3 percent slopes	10	WI Predominantly Nonhydric	Depressions
ShB	Saylesville silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
Sm	Sebewa silt loam, 0 to 2 percent slopes	96	WI Predominantly Hydric	Lakebeds (relict)
SvB2	Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded	0	WI Nonhydric	—
SvC2	Sisson-Casco-Hochheim complex, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
ThB2	Theresa silt loam, 2 to 6 percent slopes, eroded	0	WI Nonhydric	—
Ww	Wet alluvial land	100	WI Hydric	—
ZuC2	Zurich silt loam, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—

Hydric Soil List - All Components

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

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

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

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

Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

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

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

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

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

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

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

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Report—Hydric Soil List - All Components

Hydric Soil List - All Components–WI131-Washington County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
Am: Alluvial land	Alluvial land	90	Alluvial flats	No	—
	Wet alluvial land	10	Flood plains	Yes	2,3,4
AtA: Ashkum silty clay loam, 0 to 2 percent slopes	Ashkum-Drained	85-100	End moraines,ground moraines	Yes	2
	Peotone-Drained	0-9	Depressions on ground moraines	Yes	2
	Orthents, clayey	0-3	Lake plains,ground moraines	No	—
	Urban land	0-3	Ground moraines	No	—
FsB: Fox silt loam, 2 to 6 percent slopes	Fox	80-90	Outwash plains	No	—
	Casco	5-10	Outwash plains	No	—
	St. Charles-Gravelly substratum	5-10	Outwash plains	No	—
HmB: Hochheim loam, 2 to 6 percent slopes	Hochheim	85-92	Drumlins	No	—
	Theresa	5-8	Drumlins	No	—
	Lamartine	3-7	Drumlins	No	—
HmB2: Hochheim loam, 2 to 6 percent slopes, eroded	Hochheim-Eroded	80-91	Drumlins	No	—
	Theresa-Eroded	6-12	Till plains	No	—
	Lamartine	3-8	Drumlins	No	—
HmC2: Hochheim loam, 6 to 12 percent slopes, eroded	Hochheim-Eroded	85-92	Drumlins	No	—
	Hochheim	4-7	Drumlins	No	—
	Theresa	4-8	Drumlins	No	—
HoC3: Hochheim soils, 6 to 12 percent slopes, severely eroded	Hochheim	60	Till plains	No	—
	Hochheim	40	Till plains	No	—
JuA: Juneau silt loam, 1 to 3 percent slopes	Juneau	100	Drumlins	No	—
LmA: Lamartine silt loam, 0 to 3 percent slopes	Lamartine	80-91	Interdrumlins	No	—
	Pella	6-11	Drainageways	Yes	2,3
	Ossian	3-9	Depressions	Yes	2,3
MoB: Mayville silt loam, 2 to 6 percent slopes	Mayville	80-95	Drumlins	No	—
	Dodge	5-17	Drumlins	No	—
	Lamartine	0-3	Drumlins	No	—

Hydric Soil List - All Components–WI131-Washington County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
MtA: Mequon silt loam, 1 to 3 percent slopes	Mequon	90	Drainageways	No	—
	Ashkum	10	Depressions	Yes	2,3
OuB: Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes	Ozaukee-High carbonate substratum	92-100	End moraines,ground moraines	No	—
	Ashkum-Drained	0-5	Ground moraines,end moraines	Yes	2
	Orthents, clayey	0-3	Ground moraines	No	—
	Urban land	0-3	Ground moraines	No	—
OuB2: Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded	Ozaukee-High carbonate substratum, eroded	92-100	Ground moraines,end moraines	No	—
	Ashkum-Drained	0-5	Ground moraines,end moraines	Yes	2
	Urban land	0-3	Ground moraines	No	—
	Orthents, clayey	0-3	Ground moraines	No	—
OuC2: Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded	Ozaukee-High carbonate substratum, eroded	88-100	End moraines,ground moraines	No	—
	Ozaukee-Severely eroded	0-5	End moraines,ground moraines	No	—
	Urban land	0-5	Ground moraines	No	—
	Mequon	0-5	Ground moraines	No	—
OuD2: Ozaukee silt loam, high carbonate substratum, 12 to 20 percent slopes, eroded	Ozaukee-High carbonate substratum, eroded	88-100	Ground moraines,end moraines	No	—
	Ozaukee-Severely eroded	0-5	Ground moraines,end moraines	No	—
	Mequon	0-5	Ground moraines	No	—
	Urban land	0-5	Ground moraines	No	—
Pc: Palms mucky peat, 0 to 2 percent slopes	Palms-Mucky peat	80-95	Interdrumlins	Yes	1,2,3
	Houghton-Mucky peat	3-15	Depressions	Yes	1,2,3
	Adrian	2-5	Interdrumlins	Yes	1,3
Ph: Pella silt loam, 0 to 2 percent slopes	Pella	80-91	Drainageways	Yes	2,3
	Kendall	5-9	Drainageways	No	—
	Lamartine	4-8	Drainageways	No	—
	Palms-Muck	1-3	Depressions	Yes	1,3
RaA: Radford silt loam, 0 to 3 percent slopes	Radford	80-95	Flood plains,drainageways	No	—
	Otter	2-8	Flood plains,drainageways	Yes	2,3

Hydric Soil List - All Components–WI131-Washington County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
	Sable	2-5	Depressions	Yes	2,3
	Sebewa	1-4	Depressions	Yes	2,3
	Drummer	0-3	Depressions	Yes	2,3
ShB: Saylesville silt loam, 2 to 6 percent slopes	Saylesville	100	Lakebeds (relict)	No	—
Sm: Sebewa silt loam, 0 to 2 percent slopes	Sebewa	80-95	Depressions	Yes	2,3
	Adrian	3-12	Lakebeds (relict)	Yes	1,3
	Ionia	1-5	Rises	No	—
	Fox	0-3	Rises	No	—
SvB2: Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded	Sisson	31	Terminal moraines	No	—
	Casco	29	Terminal moraines	No	—
	Hochheim	20	Terminal moraines	No	—
SvC2: Sisson-Casco-Hochheim complex, 6 to 12 percent slopes, eroded	Sisson	31	Terminal moraines	No	—
	Casco	29	Terminal moraines	No	—
	Hochheim	20	Terminal moraines	No	—
ThB2: Theresa silt loam, 2 to 6 percent slopes, eroded	Theresa-Eroded	80-90	Drumlins	No	—
	Hochheim-Eroded	9-15	Drumlins	No	—
	Lamartine	1-5	Drumlins	No	—
Ww: Wet alluvial land	Wet alluvial land	100	Depressions on alluvial flats,drainageways on alluvial flats,flood plains on alluvial flats	Yes	2,3,4
ZuC2: Zurich silt loam, 6 to 12 percent slopes, eroded	Zurich-Eroded	85-95	Lakebeds (relict)	No	—
	Dresden	3-6	Stream terraces	No	—
	Wauconda	2-5	Lakebeds (relict)	No	—
	Orthents-Loamy	0-4	Lake plains,outwash plains,lakebeds (relict),ground moraines	No	—

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.

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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).

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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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Report—Hydric Soils

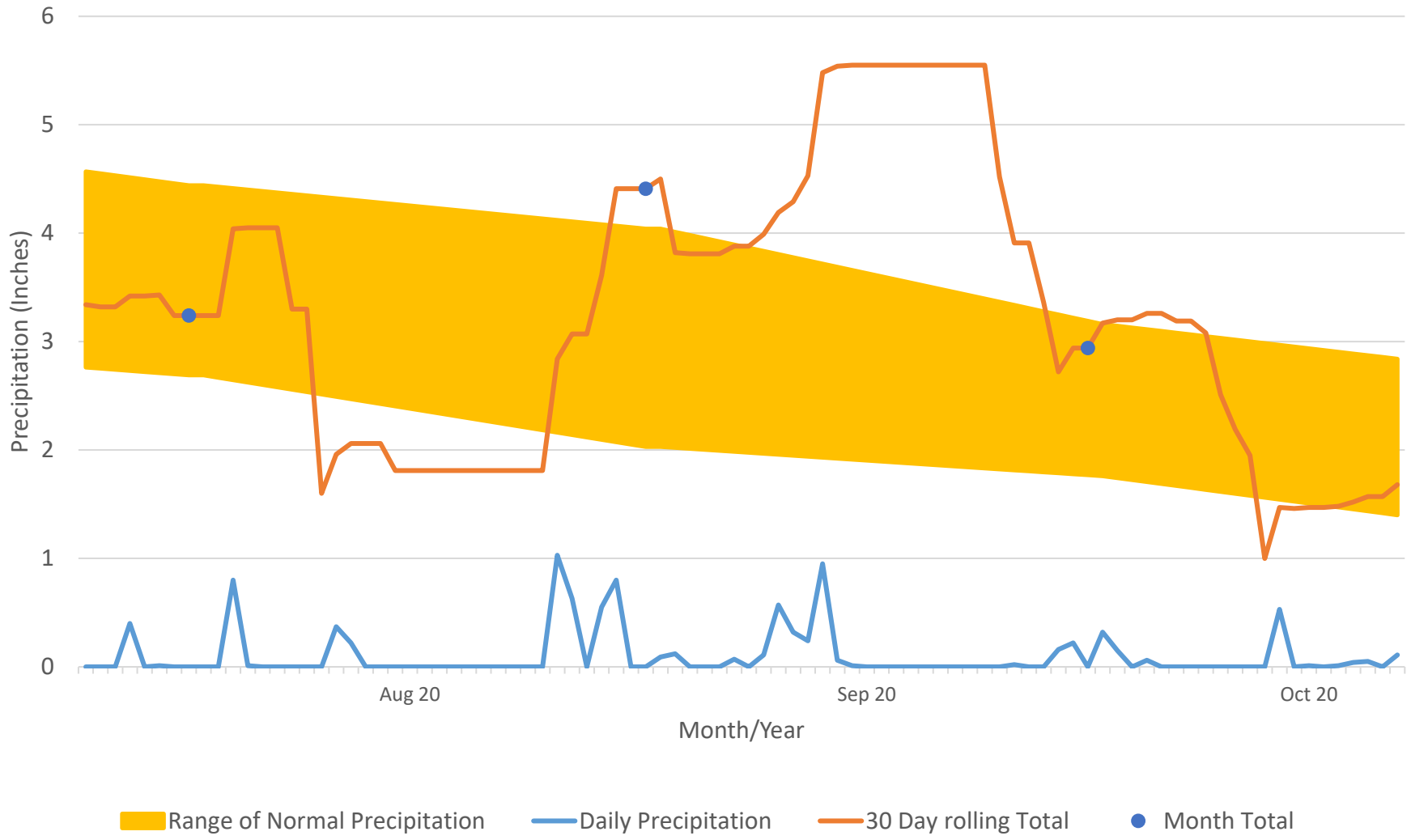
Hydric Soils–Washington County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
Am—Alluvial land				
	Wet alluvial land	10	Flood plains	2, 3, 4
AtA—Ashkum silty clay loam, 0 to 2 percent slopes				
	Ashkum, drained	92	End moraines, ground moraines	2
	Peotone, drained	5	Depressions on ground moraines	2

Hydric Soils–Washington County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
LmA—Lamartine silt loam, 0 to 3 percent slopes				
	Pella	8	Drainageways	2, 3
	Ossian	7	Depressions	2, 3
MtA—Mequon silt loam, 1 to 3 percent slopes				
	Ashkum	10	Depressions	2, 3
OuB—Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes				
	Ashkum, drained	2	Ground moraines, end moraines	2
OuB2—Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded				
	Ashkum, drained	2	Ground moraines, end moraines	2
Pc—Palms mucky peat, 0 to 2 percent slopes				
	Palms, mucky peat	90	Interdrumlins	1, 2, 3
	Houghton, mucky peat	7	Depressions	1, 2, 3
	Adrian	3	Interdrumlins	1, 3
Ph—Pella silt loam, 0 to 2 percent slopes				
	Pella	85	Drainageways	2, 3
	Palms, muck	2	Depressions	1, 3
RaA—Radford silt loam, 0 to 3 percent slopes				
	Otter	4	Flood plains, drainageways	2, 3
	Sable	3	Depressions	2, 3
	Sebewa	2	Depressions	2, 3
	Drummer	1	Depressions	2, 3
Sm—Sebewa silt loam, 0 to 2 percent slopes				
	Sebewa	90	Depressions	2, 3
	Adrian	6	Lakebeds (relict)	1, 3
Ww—Wet alluvial land				
	Wet alluvial land	100	Depressions on alluvial flats, drainageways on alluvial flats, flood plains on alluvial flats	2, 3, 4

Appendix F:

Precipitation Information

90 Day Antecedent Precipitation Rolling Total
Washington County, Wisconsin
Evergreen Consultants Project No. WSH20-013-01



NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	11/17/2020	**Landowner/Project**	WSH20-013-01
Weather Station	Hartford 2 W, WI	**State**	Wisconsin
County	Washington County	**Growing Season**	yes
Photo/obs Date	10/29/2020	**Soil Name**	Ashkum silty clay loam

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition **D**ry, **W**et, **N**ormal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	September	2.03	4.04	3.32	N	2	3	6
2nd Prior Month*	August	2.69	4.44	3.78	N	2	2	4
3rd Prior Month*	July	3.00	4.99	4.29	N	2	1	2
							Sum	**12**

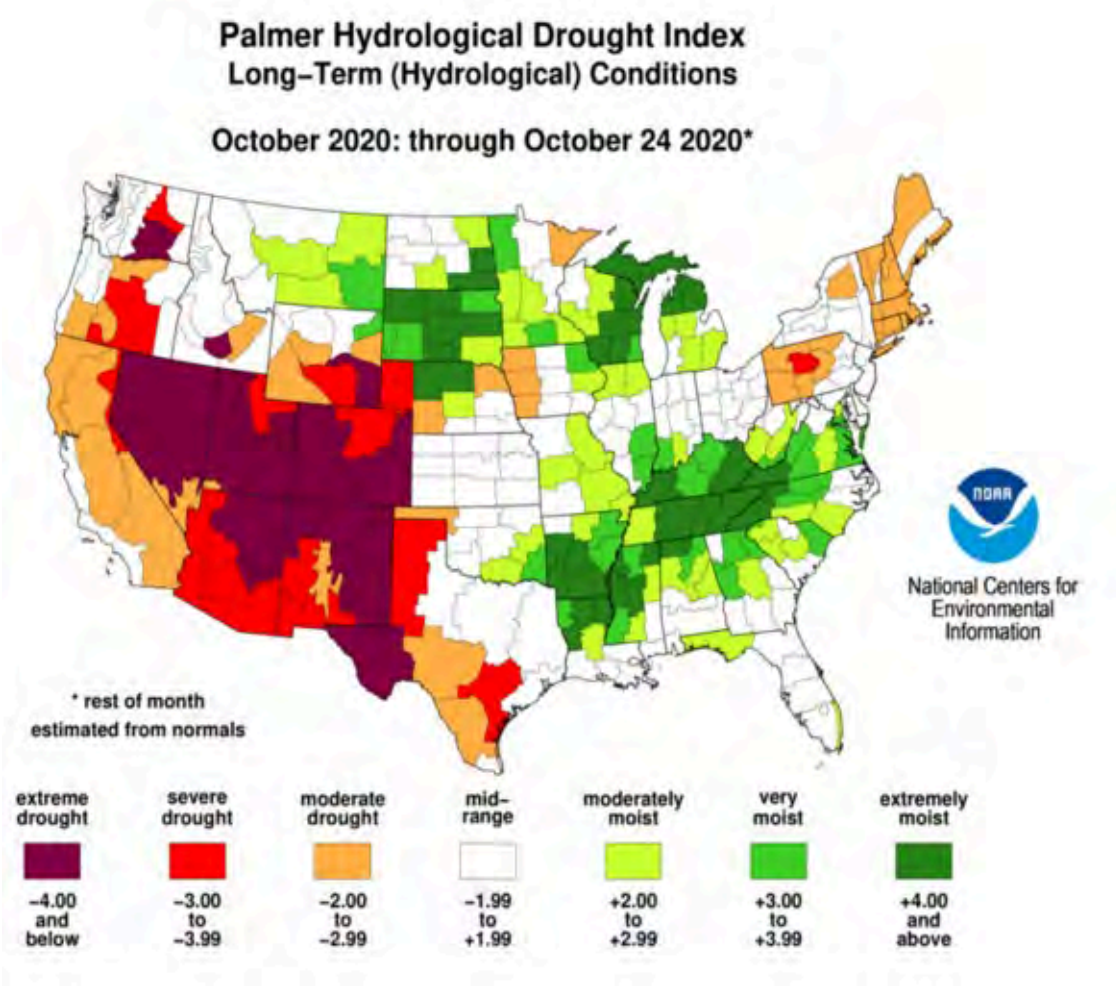
*compared to photo/observation date

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: **prior period has been normal**

WETS Station: HARTFORD 2 W, WI			
Requested years: 1981 - 2010			
Month	Avg Precip	30% chance precip less than	30% chance precip more than
Jan	1.42	0.77	1.72
Feb	1.18	0.53	1.43
Mar	1.69	0.97	2.03
Apr	3.06	2.08	3.62
May	3.36	2.4	4.09
Jun	4.1	2.48	4.96
Jul	4.29	3	4.99
Aug	3.78	2.69	4.44
Sep	3.32	2.03	4.04
Oct	2.83	1.76	3.16
Nov	2.27	1.22	2.68
Dec	1.59	1	1.98



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

STATION	NAME	DATE	PRCP
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/24/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/25/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/26/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/27/2020	0.4
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/28/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/29/2020	0.01
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/30/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	7/31/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/1/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/2/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/3/2020	0.8
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/4/2020	0.01
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/5/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/6/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/7/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/8/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/9/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/10/2020	0.37
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/11/2020	0.22
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/12/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/13/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/14/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/15/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/16/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/17/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/18/2020	0
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US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/22/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/23/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/24/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/25/2020	1.03
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/26/2020	0.63
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/27/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/28/2020	0.55
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/29/2020	0.8

US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/30/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	8/31/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/1/2020	0.09
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/2/2020	0.12
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/3/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/4/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/5/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/6/2020	0.07
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/7/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/8/2020	0.11
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/9/2020	0.57
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/10/2020	0.32
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/11/2020	0.24
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/12/2020	0.95
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/13/2020	0.06
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/14/2020	0.01
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/15/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/16/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/17/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/18/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/19/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/20/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/21/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/22/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/23/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/24/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/25/2020	0.02
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/26/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/27/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/28/2020	0.16
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/29/2020	0.22
US1WIWS0030	HARTFORD 2.9 ENE, WI US	9/30/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/1/2020	0.32
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/2/2020	0.15
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/3/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/4/2020	0.06

US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/5/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/6/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/7/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/8/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/9/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/10/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/11/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/12/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/13/2020	0.53
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/14/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/15/2020	0.01
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/16/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/17/2020	0.01
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/18/2020	0.04
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/19/2020	0.05
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/20/2020	0
US1WIWS0030	HARTFORD 2.9 ENE, WI US	10/21/2020	0.11

Appendix G:

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T1A

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): ditch **Local relief (concave, convex, none):** concave **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.274635 **Long.:** -88.192378 **Datum:**

Soil Map Unit Name: Sm- Sebewa silt loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes (●) No ( )

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes (●) No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Hydric Soil Present? Yes (●) No ( )	
Wetland Hydrology Present? Yes (●) No ( )	

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

This is a roadside ditch infested with cattail. The ditch was excavated in upland soils in 2007.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present? Yes (●) No ( ) Depth (inches): 2

Water Table Present? Yes ( ) No (●) Depth (inches):

Saturation Present? (includes capillary fringe) Yes ( ) No (●) Depth (inches):

Wetland Hydrology Present? Yes (●) No ( )

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

Remarks:

This is a nearly flat area within a roadside ditch. Water is perched on the silty clay loam soil. The dominance by cattail demonstrated the water persists at or near the surface for prolonged periods of time.

VEGETATION - Use scientific names of plants

Sampling Point: T1A

Tree Stratum (Plot size: Linear 15'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	5	☑	OBL
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 15'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Typha x glauca*	100	☑	OBL
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	100	= Total Cover	
Woody Vine Stratum (Plot size: Linear 15'x100')			
1. *Solanum dulcamara*	10	☑	FAC
2.	0	☐	
3.	0	☐	
4.	0	☐	
	10	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	105	x 1 =	105	
FACW species	0	x 2 =	0	
FAC species	10	x 3 =	30	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	115	(A)	135	(B)

Prevalence Index = B/A = 1.174

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T1A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-20	10YR	2/2	85	7.5YR	4/6	5	C	M	Silty Clay Loam	
	10YR	5/4	10						Silty Clay	mixed in
20-24	10YR	5/4	93	10YR	4/6	5	C	M	Silty Clay	
				10YR	4/2	2	D	M		

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil was recently formed in the roadside ditch

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T1B

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.274849 **Long.:** -88.192354 **Datum:** NAD83

Soil Map Unit Name: Sm- Sebewa silt loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a planted corn field.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This is Area G on the hydrology assessment. The area displayed wet signature in 19% of normal years and consisted of soil signatures and crop stress.
D1 and C9 were not confirmed in the field and hydric soil indicators were not present.

VEGETATION - Use scientific names of plants

Sampling Point: T1B

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Taraxacum officinale*	5	☑	FACU
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

Planted corn field, corn is healthy. No adjacent vegetation in similar landscape position to review, would not expect to find hydrophytic vegetation at this location under normal circumstances as there is no wetland hydrology and no hydric soil indicators.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T1B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-16	10YR	3/3	100						Silty Clay Loam	
16-24	10YR	5/4	97	10YR	5/6	3	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T1C

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.03282 **Long.:** -88.191915 **Datum:** NAD83

Soil Map Unit Name: RaA- Radford silt loam, 0 to 3 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is the edge of a cropped corn field. There is a slight rise and a drainage ditch on the adjacent property to the east that helps drain this area.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

There is a drainage ditch on the adjacent property to the east that helps drain this field.

VEGETATION - Use scientific names of plants

Sampling Point: T1C

Tree Stratum (Plot size: Linear 10'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 10'x40')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	50	☑	FACW
2. *Setaria pumila*	10	☐	FAC
3. *Panicum virgatum*	10	☐	FAC
4. *Sonchus arvensis*	15	☑	FACU
5. *Pastinaca sativa*	15	☑	UPL
6. *Taraxacum officinale*	5	☐	FACU
7. *Cirsium vulgare*	5	☐	FACU
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	110	= Total Cover	
Woody Vine Stratum (Plot size: Linear 10'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	50	x 2 =	100	
FAC species	20	x 3 =	60	
FACU species	25	x 4 =	100	
UPL species	15	x 5 =	75	
Column Totals:	110	(A)	335	(B)

Prevalence Index = B/A = 3.045

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

Adjacent corn is healthy, vegetation taken from edge of the corn field.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T1C

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-12	10YR	3/3	100						Silty Clay Loam	
12-13	10YR	3/3	98	5YR	3/4	2	C	M	Silty Clay Loam	
13-20	10YR	3/3	100						Silty Clay Loam	
20-24	10YR	2/2	100						Silty Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T1D

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.276079 **Long.:** -88.192052 **Datum:** NAD83

Soil Map Unit Name: RaA- Radford silt loam, 0 to 3 percent slopes **NWI classification:** none

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

Are Vegetation ◉ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a planted hay field recently cut, used adjacent vegetation in tree line. The center of the tree line is at a higher elevation but along the field edge it is in a similar landscape position.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

Field is well-drained.

This is Area F on the hydrology assessment. The area displayed wet signature in 10% of normal years and consisted of soil signatures and crop stress.
D1 and C9 were not confirmed in the field and hydric soil indicators were not present.

VEGETATION - Use scientific names of plants

Sampling Point: T1D

Tree Stratum (Plot size: Linear 20'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	☑	FAC
2. *Tilia americana*	15	☑	FACU
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 20'x35')			
1. *Lonicera x bella*	30	☑	FACU
2. *Rhamnus cathartica*	5	☐	FAC
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	35	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	10	☐	FACW
2. *Bromus inermis*	25	☑	UPL
3. *Taraxacum officinale*	10	☐	FACU
4. *Trifolium repens*	5	☐	FACU
5. *Solidago altissima*	20	☑	FACU
6. *Daucus carota*	10	☐	UPL
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	80	= Total Cover	
Woody Vine Stratum (Plot size: Linear 20'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	10	x 2 =	20	
FAC species	25	x 3 =	75	
FACU species	80	x 4 =	320	
UPL species	35	x 5 =	175	
Column Totals:	150	(A)	590	(B)

Prevalence Index = B/A = 3.933

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

Used vegetation from tree line to the north at approximately the same landscape position. Hay field is healthy, no drowned out crops or crop stress. The center of the tree line was not used as it is in a higher topographic position than the field.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T1D

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	3/2	100						Silty Clay Loam	
6-14	10YR	3/2	97	5YR	3/4	3	C	M	Silty Clay Loam	
14-20	10YR	3/2	100						Silty Clay Loam	
20-24	10YR	4/4	98	10YR	4/6	2	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T1E

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.276708 **Long.:** -88191876 **Datum:** NAD83

Soil Map Unit Name: Ph- Pella silt loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☑ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a planted hay field. This area is drained by an ag. ditch to the east. Drowned out crops are visible off property to the north in the low area of the field. Crop is healthy in this location.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area is drained by an agricultural ditch to the east of the property. Relict hydrology was observed , redox features from 6-16 inches are broken from plowing and are not recent formations.

This is Area E on the hydrology assessment. The area displayed wet signature in 19% of normal years and consisted of soil signatures and crop stress. The area displayed wet signatures in mostly wet years.
D1 and C9 were not confirmed in the field.

VEGETATION - Use scientific names of plants

Sampling Point: T1E

Tree Stratum (Plot size: Linear 3'x20')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 3'x20')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: Linear 3'x20')			
1. *Daucus carota*	30	☑	UPL
2. *Poa pratensis*	30	☑	FACU
3. *Sonchus arvensis*	20	☑	FACU
4. *Taraxacum officinale*	10	☐	FACU
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	90	= Total Cover	
Woody Vine Stratum (Plot size: Linear 3'x20')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	60	x 4 =	240	
UPL species	30	x 5 =	150	
Column Totals:	90	(A)	390	(B)

Prevalence Index = B/A = 4.333

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

Used small strip of adjacent vegetation in same landscape position to the east. Vegetation adjacent to the drowned out area to the north changes to Cyperus esculentus and Panicum vulgare. Crop is healthy in this area and drowned out off property to the north.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T1E

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	3/2	100						Silt Loam	
6-16	10YR	3/2	95	5YR	3/4	5	C	M	Silt Loam	
16-18	10YR	4/3	97	10YR	4/2	3	D	M	Silty Clay Loam	
18-24	10YR	5/4	95	10YR	5/2	5	D	M	Very Fine Sandy Loam	mixed with rocks

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

This is a relict hydric hydrology drained by an ag ditch to the east. Redox features from 6-16 inches are broken from plowing and not recent formations.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T2A

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave/convex **Slope:** 10.0 % / 5.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.276533 **Long.:** -88.193158 **Datum:** NAD83

Soil Map Unit Name: RaA- Radford silt loam, 0 to 3 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a vegetated swale that conveys stormwater from the roadside ditches to a stormwater pond.
The swale is concave across and convex downlsope.
This swale was created in 2005.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 12 inches.

Remarks:

Water is conveyed through this swale from roadside ditches to a stormwater pond. Water will not persist on this steep slope.

VEGETATION - Use scientific names of plants

Sampling Point: T2A

Tree Stratum (Plot size: Linear 10'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 10'x70')			
1. *Lonicera x bella*	2	☐	FACU
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Poa pratensis*	80	☑	FACU
2. *Bromus inermis*	10	☐	UPL
3. *Daucus carota*	3	☐	UPL
4. *Symphyotrichum ericoides*	3	☐	FACU
5. *Schedonorus arundinaceus*	30	☑	FACU
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	126	= Total Cover	
Woody Vine Stratum (Plot size: Linear 10'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	115	x 4 =	460	
UPL species	13	x 5 =	65	
Column Totals:	128	(A)	525	(B)

Prevalence Index = B/A = 4.102

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

This swale has not been cut this year.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T2A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-8	10YR	3/3	100					Silt Loam	
8-12	7.5YR	4/4	100					Loamy Sand	
12-								rock	Refusal on large rocks

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

This is a constructed stormwater conveyance ditch with a rock bottom.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T2B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 10.0 % / 5.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.277145 **Long.:** -88.193446 **Datum:** NAD83

Soil Map Unit Name: RaA- Radford silt loam, 0 to 3 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a grassed buffer between a cropped field and a stormwater basin. This area is cut a few times per year.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area is a steep slope that drains to a stormwater pond.

VEGETATION - Use scientific names of plants

Sampling Point: T2B

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Poa pratensis*	80	☑	FACU
2. *Schedonorus arundinaceus*	25	☑	FACU
3. *Taraxacum officinale*	5	☐	FACU
4. *Trifolium repens*	5	☐	FACU
5. *Setaria pumila*	5	☐	FAC
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	5	x 3 =	15	
FACU species	115	x 4 =	460	
UPL species	0	x 5 =	0	
Column Totals:	120	(A)	475	(B)

Prevalence Index = B/A = 3.958

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

This area is cut a few times a year.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T2B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-24	10YR	3/3	100						Fine Sandy Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T3A

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Ditch **Local relief (concave, convex, none):** concave/convex **Slope:** 4.0 % / 2.3 °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.277793 **Long.:** -88.194846 **Datum:** NAD83

Soil Map Unit Name: OuB2- Ozaukee silt loam, high carbonate substratum, 2 to 6% slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a constructed ditch on a hill slope that is between pavement and a cropped field.
The ditch was constructed in 2005.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This is a stormwater conveyance ditch on a hillslope. This area of the ditch is well-drained.

VEGETATION - Use scientific names of plants

Sampling Point: T3A

Tree Stratum (Plot size: Linear 10'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 10'x70')			
1. *Lonicera x bella*	0	☐	FACU
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Poa pratensis*	80	☑	FACU
2. *Schedonorus arundinaceus*	15	☐	FACU
3. *Symphyotrichum ericoides*	5	☐	FACU
4. *Symphyotrichum novae-angliae*	5	☐	FACW
5. *Coronilla varia*	15	☐	UPL
6. *Daucus carota*	5	☐	UPL
7. *Taraxacum officinale*	5	☐	FACU
8. *Asparagus officinalis*	2	☐	FACU
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	132	= Total Cover	
Woody Vine Stratum (Plot size: Linear 10'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	5	x 2 =	10	
FAC species	0	x 3 =	0	
FACU species	107	x 4 =	428	
UPL species	20	x 5 =	100	
Column Totals:	132	(A)	538	(B)

Prevalence Index = B/A = 4.076

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T3A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-16	10YR	3/3	100						Silt Loam	
16-22	10YR	3/3	97	7.5YR	4/6	3	C	M	Silt Loam	
22-24	10YR	5/4	95	10YR	4/6	5	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T3B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): ditch **Local relief (concave, convex, none):** concave **Slope:** 1-2 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 44.277967 **Long.:** -88.194566 **Datum:** NAD83

Soil Map Unit Name: OuC2- Ozaukee silt loam, high carbonate substratum, 6 to 12% slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

This is a flat area of a constructed and excavated ditch where water would persist for prolonged periods of time. It turned into an artificial wetland after it was constructed.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ◉ No ○

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

No water was encountered to 24 inches.

Remarks:

Low area within a ditch where water persists.

This is Area D on the hydrology assessment. The area displayed wet signature in 11% of normal years and consisted of crop stress.
D1 and C9 were not confirmed in the field.

VEGETATION - Use scientific names of plants

Sampling Point: T3B

Tree Stratum (Plot size: Linear 15'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 15'x45')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Typha x glauca*	50	☑	OBL
2. *Phalaris arundinacea*	50	☑	FACW
3. *Symphyotrichum lanceolatum*	15	☐	FACW
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	115	= Total Cover	
Woody Vine Stratum (Plot size: Linear 15'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50	
FACW species	65	x 2 =	130	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	115	(A)	180	(B)

Prevalence Index = B/A = 1.565

Hydrophytic Vegetation Indicators:

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T3B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-12	10YR	3/2	95	5YR	3/4	5	C	M	Silt Loam	
12-15	10YR	5/3	97	10YR	4/6	3	C	M	Sandy Clay Loam	
15-24	10YR	5/3	95	10YR	4/6	5	C	M	Silt Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The redox features formed after the construction of the ditch in 2005.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T3C

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): hillslope **Local relief (concave, convex, none):** convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.277965 **Long.:** -88.194508 **Datum:** NAD83

Soil Map Unit Name: OuC2- Ozaukee silt loam, high carbonate substratum, 6 to 12% slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is the terrace to a ditch that is cut a few times a year and the start of a hillslope that drains to the south.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area drains to the ditch.

VEGETATION - Use scientific names of plants

Sampling Point: T3C

Tree Stratum (Plot size: Linear 10'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 10'x70')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Poa pratensis*	35	☑	FACU
2. *Schedonorus arundinaceus*	35	☑	FACU
3. *Daucus carota*	10	☐	UPL
4. *Taraxacum officinale*	3	☐	FACU
5. *Sonchus arvensis*	7	☐	FACU
6. *Coronilla varia*	20	☐	UPL
7. *Cirsium vulgare*	3	☐	FACU
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	113	= Total Cover	
Woody Vine Stratum (Plot size: Linear 10'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	83	x 4 =	332	
UPL species	30	x 5 =	150	
Column Totals:	113	(A)	482	(B)

Prevalence Index = B/A = 4.265

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

This area is cut a few times per year but is not maintained on a regular basis.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T3C

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-8	10YR	3/3	100					Silt Loam	
8-12	7.5YR	4/4	100					Sandy Loam	
12-24	5YR	4/4	100					Silty Clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T4A

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279789 **Long.:** -88.199806 **Datum:** NAD83

Soil Map Unit Name: SvB2- Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a cropped corn field.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area drains south to a roadside ditch.

This is Area A on the hydrology assessment. The area displayed wet signature in 5% of normal years and consisted of soil signatures and crop stress.
D1 and C9 were not confirmed in the field and hydric soil indicators were not present.

VEGETATION - Use scientific names of plants

Sampling Point: T4A

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Herb Stratum (Plot size: 5 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	0	**= Total Cover**	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	**= Total Cover**	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0.000

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

corn is healthy in this field. There is no adjacent vegetation in a similar landscape position. No hydrology indicators and no hydric soil observed so upland vegetation would dominate this area if it was not cropped.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T4A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-16	10YR	3/3	100						Silt Loam	
16-20	10YR	5/4	98	10YR	4/6	2	C	M	Silty Clay Loam	
20-24	10YR	5/4	95	10YR	4/6	5	C	M	Silt Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T4B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Ditch **Local relief (concave, convex, none):** concave **Slope:** 1.0 % / 0.6 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279721 **Long.:** -88.199792 **Datum:** NAD83

Soil Map Unit Name: SvB2- Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

This is a roadside ditch infested with reed canary grass and cattail. The ditch was constructed in 2005.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ◉ No ○

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

No water was encountered to 24 inches.

Remarks:

The ditch has some microtopographic relief and thick vegetation that is not cut or maintained. The ups and downs and thick vegetation in the ditch cause water to pond and persist.

VEGETATION - Use scientific names of plants

Sampling Point: T4B

Tree Stratum (Plot size: Linear 10'x200')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 10'x70')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	60	☑	FACW
2. *Typha x glauca*	40	☑	OBL
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	100	= Total Cover	
Woody Vine Stratum (Plot size: Linear 10'x200')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	40	x 1 =	40	
FACW species	60	x 2 =	120	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	100	(A)	160	(B)

Prevalence Index = B/A = 1.600

Hydrophytic Vegetation Indicators:

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T4B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-22	10YR	3/2	95	7.5YR	4/6	5	C	M	Silt Loam	Fill soils
22-24	10YR	6/4	90	10YR	6/6	10	C	M	Silt Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The redox features formed after the construction of the ditch in 2005.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T4C

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Ditch **Local relief (concave, convex, none):** concave/convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279499 **Long.:** -88.200290 **Datum:** NAD83

Soil Map Unit Name: SvB2- Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This is a roadside ditch constructed in 2005.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

Well-drained portion of a roadside ditch.

VEGETATION - Use scientific names of plants

Sampling Point: T4C

Tree Stratum (Plot size: Linear 6'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 6'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: Linear 6'x13')			
1. *Poa pratensis*	60	☑	FACU
2. *Sonchus arvensis*	15	☐	FACU
3. *Schedonorus arundinaceus*	20	☐	FACU
4. *Elymus repens*	5	☐	FACU
5. *Solidago altissima*	5	☐	FACU
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	105	= Total Cover	
Woody Vine Stratum (Plot size: Linear 6'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	105	x 4 =	420	
UPL species	0	x 5 =	0	
Column Totals:	105	(A)	420	(B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T4C

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	3/3	100						Silt Loam	
6-14	10YR	3/3	98	7.5YR	4/6	2	C	M	Silt Loam	
14-24	10YR	5/4	98	7.5YR	4/6	2	C	M	Sandy Loam	mixed with gravel

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T4D

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279530 **Long.:** -88.200397 **Datum:** NAD83

Soil Map Unit Name: SvB2- Sisson-Casco-Hochheim complex, 2 to 6 percent slopes, eroded **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present? Yes ○ No ◉	
Wetland Hydrology Present? Yes ○ No ◉	

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

Cropped corn field, crop is healthy.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area would drain to the roadside ditch.

VEGETATION - Use scientific names of plants

Sampling Point: T4D

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Herb Stratum (Plot size: 5 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	0	**= Total Cover**	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	**= Total Cover**	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0.000

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

There is no vegetation at similar landscape position to review. Corn crop is healthy. Since there is no hydrology indicators and no hydric soil indicators it is expected non-hydrophytic vegetation would dominate this area if it was not cropped.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T4D

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-14	10YR	3/3	100						Silt Loam	
14-18	10YR	5/4	95	10YR	4/6	5	C	M	Silt Loam	
18-24	10YR	4/4	100						Sandy Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T5A

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Ditch **Local relief (concave, convex, none):** concave **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279669 **Long.:** -88.198062 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

Nearly level area of a roadside ditch. This wetland is infested with reed canary grass and within a roadside ditch that was constructed in 2005.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ◉ No ○

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

No water was encountered to 24 inches.

Remarks:

This is a nearly level roadside ditch where water persists for prolonged periods of time.

VEGETATION - Use scientific names of plants

Sampling Point: T5A

Tree Stratum (Plot size: Linear 5'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 5'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	50	☑	FACW
2. *Cyperus esculentus*	20	☑	FACW
3. *Poa pratensis*	20	☑	FACU
4. *Rumex crispus*	5	☐	FAC
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	95	= Total Cover	
Woody Vine Stratum (Plot size: Linear 5'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	70	x 2 =	140	
FAC species	5	x 3 =	15	
FACU species	20	x 4 =	80	
UPL species	0	x 5 =	0	
Column Totals:	95	(A)	235	(B)

Prevalence Index = B/A = 2.474

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T5A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-4	10YR	2/2	100						Silty Clay Loam	
4-12	10YR	2/2	95	7.5YR	4/6	5	C	M	Silty Clay Loam	
12-24	10YR	5/3	88	10YR	4/6	7	C	M	Sandy Clay Loam	mixed with gravel
				10YR	4/2	5	D	M		

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

Redox features formed after the construction of the ditch in 2005.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 21-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T5B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279669 **Long.:** -88.197984 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present? Yes ○ No ◉	
Wetland Hydrology Present? Yes ○ No ◉	

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

Cropped hay field that was recently cut, adjacent vegetation was used.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

Healthy crop. This area drains to the east and then into a ditch south of the property.

VEGETATION - Use scientific names of plants

Sampling Point: T5B

Tree Stratum (Plot size: Linear 8'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 8'x100')			
1. *Lonicera x bella*	5	☑	FACU
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	5	= Total Cover	
Herb Stratum (Plot size: Linear 8'x10')			
1. *Poa pratensis*	75	☑	FACU
2. *Daucus carota*	10	☐	UPL
3. *Cirsium vulgare*	5	☐	FACU
4. *Taraxacum officinale*	10	☐	FACU
5. *Phalaris arundinacea*	5	☐	FACW
6. *Setaria pumila*	5	☐	FAC
7. *Medicago sativa*	3	☐	UPL
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	113	= Total Cover	
Woody Vine Stratum (Plot size: Linear 8'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	5	x 2 =	10	
FAC species	5	x 3 =	15	
FACU species	95	x 4 =	380	
UPL species	13	x 5 =	65	
Column Totals:	118	(A)	470	(B)

Prevalence Index = B/A = 3.983

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

Used adjacent vegetation in similar landscape position, would assume non-hydrophytic vegetation would grow in this area due to lack of hydric soil and wetland hydrology indicators. The hay field has been recently cut.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T5B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-10	10YR	2/2	100						Silty Clay Loam	Fill soils
10-15	10YR	2/2	98	5YR	3/4	2	C	M	Silty Clay Loam	
15-20	10YR	2/2	95	5YR	3/4	5	C	M	Silty Clay Loam	
20-24	10YR	2/2	90	5YR	3/4	10	C	M	Silty Clay Loam	refusal at 24 inches

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

This area has been historically filled. Refusal on large rocks at 24 inches. Tried several spots with similar results.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T5C

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** concave **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.279683 **Long.:** -88.197824 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

This area is a low spot in a cropped field. Historically there was a ditch that ran through close to this area but it has since been graded and roads have been constructed over most of the ditch that ran between two cropped fields.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ◉ No ○

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

No water was encountered to 24 inches.

Remarks:

This area has spots of drowned out crops and crop stress. Tractor ruts have standing water but it is not connected to a water table, most likely from rainfall ponding on compacted soil.

This is Area B on the hydrology assessment. The area displayed wet signature in 38% of normal years and consisted of soil signatures and crop stress. The area displayed wet signatures in mostly wet years.
D1 and C9 were confirmed in the field.

VEGETATION - Use scientific names of plants

Sampling Point: T5C

Tree Stratum (Plot size: Entire Wetland)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Entire Wetland)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria pensylvanica*	10	☑	FACW
2. *Echinochloa crus-galli*	25	☑	FAC
3. *Typha x glauca*	5	☐	OBL
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	40	= Total Cover	
Woody Vine Stratum (Plot size: Entire Wetland)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5	
FACW species	10	x 2 =	20	
FAC species	25	x 3 =	75	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	40	(A)	100	(B)

Prevalence Index = B/A = 2.500

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

Drowned out crop in this area, no adjacent vegetation in a similar landscape position.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T5C

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	2/2	100						Silty Clay Loam	
6-16	10YR	2/2	95	5YR	3/4	5	C	M	Silty Clay Loam	
16-24	2.5Y	5/3	85	10YR	4/6	5	C	M	Silty Clay	
				2.5Y	5/2	10	D	M		

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T5D

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280099 **Long.:** -88.197196 **Datum:** NAD83

Soil Map Unit Name: MtA- Mequon silt loam, 1 to 3 percent **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This area is a cropped hay field that has been recently cut.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 10 inches.

Remarks:

Crop is healthy. This area drains to the east.

VEGETATION - Use scientific names of plants

Sampling Point: T5D

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Herb Stratum (Plot size: 5 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	0	**= Total Cover**	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	**= Total Cover**	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0.000

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

No adjacent vegetation in similar landscape position to review, would not expect to find hydrophytic vegetation at this location as there is no wetland hydrology and no hydric soil indicators.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T5D

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	2/2	100					Silty Clay Loam	
6-10	10YR	4/4	100					Loamy Sand	mixed with gravel
10-								rock	refusal

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Refusal at 10 inches on large rocks. Area has been filled. Air photos show the area disturbed in 2005.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T5E

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280255 **Long.:** -88.197152 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** R45BC

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

This area is a ditch with fill on both the east and west sides of the ditch. Aerial photographs show east of the ditch disturbed in 1995 through 2005 and the west side of the ditch disturbed in 2005.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ◉ No ○	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	8

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

This area receives water from the north and there seems to be a spring or seep in this area that adds water as the ditch goes to the east.

VEGETATION - Use scientific names of plants

Sampling Point: T5E

Tree Stratum (Plot size: Linear 40'x100')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	100	☑	FACW
2. *Typha x glauca*	10	☐	OBL
3. *Solidago gigantea*	3	☐	FACW
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	113	= Total Cover	
Woody Vine Stratum (Plot size: Linear 40'x100')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10	
FACW species	103	x 2 =	206	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	113	(A)	216	(B)

Prevalence Index = B/A = 1.912

Hydrophytic Vegetation Indicators:

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T5E

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-10	10YR	2/1	100						Silt Loam	
10-32	10YR	2/1	97	10YR	5/1	3	D	M	Silty Clay Loam	
32-38	5/10	Y	85	10YR	4/6	15	C	M	Clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☑ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T5F

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 1.0 % / 0.6 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280571 **Long.:** -88.197156 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☑ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This area was historically used as a field access road and then it was expanded and filled in 1995 through 2005 and used as a staging area for equipment.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 4 inches.

Remarks:

This area drains to the south.

VEGETATION - Use scientific names of plants

Sampling Point: T5F

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	5	☑	FAC
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	5	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera x bella*	15	☑	FACU
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	15	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Poa pratensis*	80	☑	FACU
2. *Taraxacum officinale*	5	☐	FACU
3. *Potentilla reptans*	10	☐	UPL
4. *Lotus corniculatus*	20	☐	FACU
5. *Solidago altissima*	5	☐	FACU
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	120	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)		
1.	0	☐
2.	0	☐
3.	0	☐
4.	0	☐
	0	= Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	5	x 3 =	15	
FACU species	125	x 4 =	500	
UPL species	10	x 5 =	50	
Column Totals:	140	(A)	565	(B)

Prevalence Index = B/A = 4.036

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T5F

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-2	10YR	3/4	100					Loamy Sand	Fill soils
2-4	10YR	4/4	100					Loamy Sand	Fill soils
4-									rock and gravel fill

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Area has been filled, refusal at four inches on large rock and gravel.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T6A

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280097 **Long.:** -88.196009 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

There is a waterway to the north approximately six feet lower in elevation that drains this area.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 34 inches.

Remarks:

Water from this area drains to the waterway to the north.

VEGETATION - Use scientific names of plants

Sampling Point: T6A

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	☑	FAC
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera x bella*	15	☑	FACU
2. *Rhamnus cathartica*	10	☑	FAC
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	25	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Solidago altissima*	3	☐	FACU
2. *Alliaria petiolata*	20	☑	FACU
3. *Lonicera x bella*	5	☐	FACU
4. *Rhamnus cathartica*	3	☐	FAC
5. *Fragaria vesca*	5	☐	UPL
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	36	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	63	x 3 =	189	
FACU species	43	x 4 =	172	
UPL species	5	x 5 =	25	
Column Totals:	111	(A)	386	(B)

Prevalence Index = B/A = 3.477

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T6A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-30	10YR	2/1	100						Silt Loam	
30-34	10YR	4/3	95	10YR	4/6	5	C	M	Silty Clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T6B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** none **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280377 **Long.:** -88.196054 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** PF01C

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

This area is located east of a fill line. Rocks and concrete chunks are visible in the adjacent filled area approximately 40 feet to the west. This area has not been filled

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ◉ No ○	Depth (inches):	1
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

This area is soft and saturated to the surface, there is most likely a spring near or under the historic fill to the west but no spring was observed.

VEGETATION - Use scientific names of plants

Sampling Point: T6B

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	10	☑	OBL
2. *Acer negundo*	10	☑	FAC
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Rhamnus cathartica*	20	☑	FAC
2. *Cornus alba*	10	☑	FACW
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	30	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	50	☑	FACW
2. *Arisaema triphyllum*	15	☐	FAC
3. *Eutrochium maculatum*	15	☐	OBL
4. *Solidago gigantea*	3	☐	FACW
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	83	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

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

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	25	x 1 =	25
FACW species	63	x 2 =	126
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	133 (A)		286 (B)

Prevalence Index = B/A = 2.150

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T6B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-40	10YR	2/1	100						Muck	

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

Hydric Soil Indicators:

- [x] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [ ] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5)
- [ ] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T6C

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280475 **Long.:** -88.196182 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☑ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This area has been historically filled. Aerial photographs shows disturbances in 1995 through 2005. Large concrete chunks, rocks and blacktop are visible on the side slope of the historic fill.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 10 inches.

Remarks:

This area drains to the east.

VEGETATION - Use scientific names of plants

Sampling Point: T6C

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	5	☑	FAC
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	5	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer negundo*	10	☑	FAC
2. *Rhamnus cathartica*	5	☐	FAC
3. *Lonicera x bella*	10	☑	FACU
4. *Elaeagnus umbellata*	20	☑	UPL
5.	0	☐	
6.	0	☐	
7.	0	☐	
	45	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Poa pratensis*	70	☑	FACU
2. *Solidago altissima*	25	☑	FACU
3. *Pastinaca sativa*	10	☐	UPL
4. *Dipsacus fullonum*	5	☐	FACU
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	20	x 3 =	60	
FACU species	110	x 4 =	440	
UPL species	30	x 5 =	150	
Column Totals:	160	(A)	650	(B)

Prevalence Index = B/A = 4.063

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T6C

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-4	10YR	3/4	100					Loamy Sand	gravel mixed in
4-10	10YR	4/4	100					Loamy Sand	gravel mixed in
10-								rocks	refusal on large rocks

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Refusal on large rocks at ten inches. Aerial photographs shows disturbances/fill in 1995 through 2005.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T7A

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Ditch **Local relief (concave, convex, none):** concave **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280672 **Long.:** -88.197577 **Datum:** NAD83

Soil Map Unit Name: MtA- Mequon silt loam, 1 to 3 percent **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes (●) No ( )

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●) No ( )	**Is the Sampled Area within a Wetland?**	Yes (●) No ( )
Hydric Soil Present?	Yes ( ) No (●)		
Wetland Hydrology Present?	Yes (●) No ( )		

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

This is a roadside ditch between a cropped field and road. It may have been a rock lined ditch in the past due to breaker rock encountered 15 inches beneath fill soils. The wetland would be considered an artificial wetland formed on fill soils.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes (●) No ( )	Depth (inches):	2+
Water Table Present?	Yes ( ) No (●)	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ( ) No (●)	Depth (inches):	

Wetland Hydrology Present? Yes (●) No ( )

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

Remarks:

Nearly level ditch. When water is high enough it drains east through a narrow ditch and some water also drains to the south. Water is perched on clayey soils and is only saturated to 4 inches. Soil from 4-10 inches is not saturated.

VEGETATION - Use scientific names of plants

Sampling Point: T7A

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	5	☑	OBL
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	5	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	10	☐	FACW
2. *Typha x glauca*	70	☑	OBL
3. *Symphyotrichum lanceolatum*	5	☐	FACW
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75	
FACW species	15	x 2 =	30	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	90	(A)	105	(B)

Prevalence Index = B/A = 1.167

Hydrophytic Vegetation Indicators:

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T7A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type [1]	Loc²	Texture	Remarks
0-15	10YR 3/2	93	5YR 3/4	7	C	M	Silty Clay Loam	Fill Soils
15-							rocks	Refusal

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

Refusal at 15 inches on large rocks. The area was filled between 1970 and 1980.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T7B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280616 **Long.:** -88.197624 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ○ No ◉

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present? Yes ○ No ◉	
Wetland Hydrology Present? Yes ○ No ◉	

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

This is a cropped hay field.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area drains to the ditch to the north.

VEGETATION - Use scientific names of plants

Sampling Point: T7B

Tree Stratum (Plot size: 30' rad.)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Sapling/Shrub Stratum (Plot size: 15' rad.)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	**= Total Cover**	
Herb Stratum (Plot size: 5' rad.)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	0	**= Total Cover**	
Woody Vine Stratum (Plot size: 30' rad.)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	**= Total Cover**	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0.000

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

No adjacent vegetation in similar landscape position to review, would not expect to find hydrophytic vegetation at this location as there is no wetland hydrology and hydric soil indicators. The field edge drops off into a deep ditch.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T7B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-16	10YR	3/2	100						Silty Clay Loam	
16-17	10YR	4/1	98	7.5YR	4/6	2	C	M	Silty Clay	
17-24	10YR	4/4	100						Sandy Clay Loam	Mixed with rocks

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Area was filled in 2005 and was also disturbed prior to 2005.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T8A

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex/concave **Slope:** 10.0 % / 5.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.276314 **Long.:** -88.197870 **Datum:** NAD83

Soil Map Unit Name: ZuC2- Zurich silt loam, 6 to 12 percent slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ◉ No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Hydric Soil Present? Yes ◉ No ○	
Wetland Hydrology Present? Yes ◉ No ○	

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

This area is a hillslope with a seep coming out of the side of the hill.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ◉ No ○	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

There is a seep coming out of the side of the hill to the east hydrating this area.

VEGETATION - Use scientific names of plants

Sampling Point: T8A

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus alba*	10	☑	FACW
2. *Salix petiolaris*	10	☑	FACW
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	50	☑	FACW
2. *Impatiens capensis*	40	☑	FACW
3. *Solidago gigantea*	20	☐	FACW
4. *Ribes americanum*	5	☐	FACW
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	10	☑	FAC
2.	0	☐	
3.	0	☐	
4.	0	☐	
	10	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

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

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	135	x 2 =	270
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	145 (A)		300 (B)

Prevalence Index = B/A = 2.069

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T8A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-20	10YR	2/1	100						Muck	
20-26	10YR	5/1	98	7.5YR	4/6	2	C	M	Silt	

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

Hydric Soil Indicators:

- [x] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [x] Black Histic (A3)
- [ ] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5)
- [ ] Depleted Below Dark Surface (A11)
- [x] Thick Dark Surface (A12)
- [ ] Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T8B

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 10.0 % / 5.7 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.276306 **Long.:** -88.198415 **Datum:** NAD83

Soil Map Unit Name: ZuC2- Zurich silt loam, 6 to 12 percent slopes, eroded **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This area is infested with Rhamnus cathartica so there is minimal to no herbacious layer. This area is located up slope of a seep in the side of the hill.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area drains to the west.

VEGETATION - Use scientific names of plants

Sampling Point: T8B

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	50	☑	FACU
2. *Malus ioensis*	15	☑	UPL
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	65	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Rhamnus cathartica*	70	☑	FAC
2. *Lonicera x bella*	5	☐	FACU
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	75	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Viola sororia*	5	☑	FAC
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	5	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	75	x 3 =	225	
FACU species	55	x 4 =	220	
UPL species	15	x 5 =	75	
Column Totals:	145	(A)	520	(B)

Prevalence Index = B/A = 3.586

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T8B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-8	10YR	3/3	100					Silt Loam	
8-24	10YR	3/4	100					Silty Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T9A

Investigator(s): Benjamin L LaCount **Section, Township, Range: S.** 01 **T.** 09N **R.** 19E

Landform (hillslope, terrace, etc.): Depression **Local relief (concave, convex, none):** concave **Slope:** 0-1 % / °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.276721 **Long.:** -88.199652 **Datum:** NAD83

Soil Map Unit Name: Pc- Palms mucky peat, 0 to 2 percent slopes **NWI classification:** PEM1F

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?**	Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○		
Wetland Hydrology Present?	Yes ◉ No ○		

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

This test plot is near the toe slope of a steep slope down to a depression.
The wetland is a mixed sedge meadow populated by lake sedge and partially infested with reed canary grass and includes areas of scrub-shrub dominated by dogwood, areas of cattail marsh, and open water.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ◉ No ○	Depth (inches):	2
Water Table Present?	Yes ◉ No ○	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Water ponds and persists here for prolonged periods of time.

VEGETATION - Use scientific names of plants

Sampling Point: T9A

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus alba*	30	☑	FACW
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	30	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Carex lacustris*	25	☑	OBL
2. *Impatiens capensis*	30	☑	FACW
3. *Phalaris arundinacea*	15	☑	FACW
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	25	x 1 =	25
FACW species	75	x 2 =	150
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		175 (B)

Prevalence Index = B/A = 1.750

Hydrophytic Vegetation Indicators:

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T9A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-10	10YR	2/2	93	5YR	3/4	7	C	M	Silt Loam	
10-24	10YR	4/2	90	7.5YR	4/6	10	C	M	Silty Clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: Silty clay

Depth (inches): 10

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T9B

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** convex **Slope:** 7.0 % / 4.0 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.276860 **Long.:** -88.199641 **Datum:** NAD83

Soil Map Unit Name: MtA- Mequon silt loam, 1 to 3 percent **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	
Hydric Soil Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Wetland Hydrology Present?	Yes ○	No ◉	

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

This area is woodland infested with buckthorn on a hillslope that slopes down to a depression.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):	
Water Table Present?	Yes ○	No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

This area drains to the south.

VEGETATION - Use scientific names of plants

Sampling Point: T9B

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	30	☑	FACU
2. *Ulmus americana*	15	☑	FACW
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Rhamnus cathartica*	50	☑	FAC
2. *Ulmus americana*	10	☐	FACW
3. *Prunus serotina*	10	☐	FACU
4. *Lonicera x bella*	15	☐	FACU
5.	0	☐	
6.	0	☐	
7.	0	☐	
	85	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Fragaria virginiana*	25	☑	FACU
2. *Rhamnus cathartica*	20	☑	FAC
3. *Viola sororia*	25	☑	FAC
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	95	x 3 =	285
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	200 (A)		655 (B)

Prevalence Index = B/A = 3.275

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T9B

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-8	10YR	3/2	100					Silt Loam	
8-18	10YR	3/3	100					Silt Loam	
18-22	10YR	5/1	100					Silty Clay Loam	
22-24	10YR	6/3	100					Silt Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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 : [3]

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: WSH20-013-01 **City/County:** Richfield/ Washington **Sampling Date:** 29-Oct-20

Applicant/Owner: Alligator Enterprises LLC **State:** WI **Sampling Point:** T13A

Investigator(s): Benjamin L LaCount **Section, Township, Range:** S. 01 T. 09N R. 19E

Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** concave/convex **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR K **Lat.:** 43.280010 **Long.:** -88.196819 **Datum:** NAD83

Soil Map Unit Name: AtA- Ashkum silty clay loam, 0 to 2 percent slopes **NWI classification:** none

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?**	Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉		
Wetland Hydrology Present?	Yes ○ No ◉		

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

This area is approximately a 6' drop in elevation, the adjacent field to the west is 6' higher in elevation.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 required)

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

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	
Water Table Present?	Yes ○ No ◉	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches):	**Wetland Hydrology Present?** Yes ○ No ◉

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

No water was encountered to 24 inches.

Remarks:

There is a slight swale that drains to the south.

This is Area C on the hydrology assessment. The area displayed wet signature in 14% of normal years and consisted of soil signatures and crop stress. The area displayed wet signatures in mostly wet years.
D1 and C9 were not confirmed in the field.

VEGETATION - Use scientific names of plants

Sampling Point: T13A

Tree Stratum (Plot size: Linear 5'x60')	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: Linear 5'x60')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	
Herb Stratum (Plot size: Linear 5'x10')			
1. *Poa pratensis*	50	☑	FACU
2. *Schedonorus arundinaceus*	40	☑	FACU
3. *Daucus carota*	10	☐	UPL
4. *Cirsium arvense*	5	☐	FACU
5. *Taraxacum officinale*	5	☐	FACU
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	110	= Total Cover	
Woody Vine Stratum (Plot size: Linear 5'x60')			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	100	x 4 =	400	
UPL species	10	x 5 =	50	
Column Totals:	110	(A)	450	(B)

Prevalence Index = B/A = 4.091

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ○ No ◉

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: T13A

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
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18-24	10YR	3/2	95	5YR	3/4	5	C	M	Silt Loam	

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Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Hit large rocks at 24 inches. This area was filled in the past in approximately 2005.