Wisconsin Department of Transportation

CTH KR - CTH H to Old Green Bay Rd

August 2018

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Document Information

Prepared for	Wisconsin Department of Transportation
Project Name	CTH KR - CTH H to Old Green Bay Rd
WisDOT Project #	3763-00-04 (amended)
Cardno Project #	J17701M18
Project Manager	Christopher Firkus, Cardno
Date	August 2018

Prepared for:

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1 Introduction

Cardno was contracted by the Wisconsin Department of Transportation (WisDOT) to complete a wetland delineation and classification of wetland resources within the proposed County Highway (CTH) KR road corridor in Racine and Kenosha Counties, Wisconsin. The survey area is in addition to previously surveyed areas along CTH KR under WisDOT work order 3763-00-04 (see previous, independent wetland report). The new surveys include areas along CTH KR, CTH H, 72nd Ave, STH 31 & Old Green Bay Rd. The study limits comprise approximately 3.8 miles and vary in width up to approximately 300 feet. This project corridor and associated delineation boundary are depicted in Figures 1-5.

Based on field investigations conducted by Cardno on July 17th, 18th, and 25th, 2018 and desktop review of related resource maps, it is our professional opinion that twenty-five wetland complexes, totaling 5.20 acres (226,577 ft^2), and two waterways are located within the project corridor.

This report has been compiled by the following staff that are trained and experienced in delineation methodologies and applicable regulations:

- **Christopher Firkus – Senior Project Scientist; Project Manager, Lead Wetland Delineator, Report Author:** Chris has over five years of wetland delineation experience for long, linear projects across the Midwest from North Dakota to Michigan. He regularly supports field surveys, including wetland delineation, T&E species evaluations, and stormwater inspection, and provides project management, including client coordination, report and permit writing, budgeting, and agency interaction. He holds a Master's of Science in Environmental Science & Policy from the University of Wisconsin – Green Bay, is a Wisconsin Certified Endangered Resource Reviewer, and holds wetland and stormwater certifications in Minnesota and Michigan.
- **Ken Carlson – Staff Scientist; Lead Wetland Delineator:** Ken has five years of experience in wetland restoration and ecology with Cardno and the past four years participating in wetland delineations and surveys. He holds a B.S. degree in Environmental Policy and Planning/Environmental Science from UW-Green Bay and has completed training including USACE and WDNR Advanced Wetland Delineation, NRCS Hydric Soils Identification, and NASECA erosion control inspection. Ken's experience includes wetland delineation, field surveys for threatened/endangered species and habitat, and environmental project management.
- **Eric Englund – Assistant Staff Scientist; Wetland Delineator, Report Author:** Eric has over four years of experience working in the fields of natural resources and environmental compliance. He holds a Bachelor's of Science in Water Resources with a Minor in GIS and Spatial Analysis from the University of Wisconsin- Stevens Point. Currently, his job responsibilities include wetland delineations, conducting field surveys for T&E species and habitat, permitting, and environmental monitoring for a variety of utility projects.
- **Alex Cohen – Senior GIS Analyst, Geospatial Manager:** Alex has over seven years of experience in natural resource ecology, including field work, GIS analysis, cartography, and modelling. He holds a Master of Science in Computational Ecology from Purdue University and a Bachelor of Science in Biology/Psychology from Calvin College. Currently, Alex is responsible for managing the Cardno WI/MN GIS team as well as Cardno's ArcGIS Online organization for the entire Midwest. Alex develops and maintains datasets and web maps for short-term and long-term multi-year projects, and is responsible for setting up GIS data collection files, turning raw field-collected data into project deliverables (including figures and tables), and managing pictures using custom scripts to format and name field-collected photos. Alex also develops custom geospatial tools to meet the many needs of clients.

- **Madalyn Lupinek – Assistant Staff Scientist:** Madalyn has several seasons of field experience and several years of GIS experience in both laboratory and field settings. She holds a B.S. degree in Environmental Sciences from UW-Madison where she completed cartography/GIS courses and a two-year undergraduate research project in soil science. Currently, Madalyn assists with wetland delineations, erosion control monitoring, field surveys for threatened and endangered species and habitat, as well as GIS tasks such as maintaining web maps for projects, setting up GIS data collection files, and processing field data into project figures.

2 Methods

Cardno conducted a field wetland determination and delineation on July 17, 18, and 27, 2018 to determine wetland boundaries within the project corridor. Prior to the field investigation, Cardno conducted a desktop review to determine the likelihood and potential location of wetlands and waterways. Sources reviewed include:

- United States Geological Survey (USGS) Topographical Map (Figure 2)
- USDA-NRCS Web Soil Survey Database for Racine and Kenosha Counties, Wisconsin (Figure 3)
- WDNR Wisconsin Wetland Inventory (WWI) Mapping (Figure 4)
- WDNR Surface Water Data Viewer

These maps show mapped wetland indicators, including hydrology and hydric soil units, within the project corridor. The sole use of any of these maps to make wetland determinations is not acceptable to the regulating agencies.

The delineation of wetlands and waterways was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* Version 2.0 (Environmental Laboratory, 2010) as required by current policy.

2.1 Survey Method

During site reconnaissance, Cardno walked the project corridor with the specific intent of determining wetland boundaries and collected data points within and near potential wetland areas to document soil characteristics, evidence of hydrology, and vegetation. Wetland ditch systems that were connected through culverted access drives and contained like communities were typically grouped with a representative pair of data points.

Cardno crews surveyed all data point locations and wetland boundaries using GPS technology. Data collection settings for the GPS units use available satellites, including two DGPS (Differential Global Positioning System) satellites, to capture location data. Cardno's GPS units acquire multiple readings per data point and use the Wide Area Augmentation System (WAAS) satellite readings to increase accuracy to sub-meter. While Cardno's GPS surveys provide reasonably spatial accuracy, they do not provide the same accuracy as a professional land survey.

2.2 Naming Protocol

Feature naming for spatial data collected in field followed the following conventions:

- DP-xx = Data Point (may also include photos)
- PP-xx = Photo Point
- S-xx = Stream
- W-xx = Wetland

Feature naming resumed with numbering where the previous CTH KR surveys ended to ensure data integrity when cross referencing between survey efforts.

2.3 Site Photographs

Representative site photographs were taken at wetland and upland sample point locations as well as for general documentation throughout the project corridor and are included in Appendix A. These photographs represent site conditions at the time of inspection within the project corridor.

2.4 Delineation Data Sheets

The Midwest Region routine wetland delineation data sheets used in the wetland delineation process are located in Appendix B. These forms are the written documentation of how representative data point locations meet or do not meet each of the wetland criteria. Plant species nomenclature follows the 2016 National Wetland Plant List (Lichvar et al., 2016). Soils were identified using the methods outlined in the *USDA NRCS Field Indicators of Hydric Soils in the United States*, *Version 8.1* (USDA-NRCS 2017). Wetland community types are based on the WisDOT community classification guide (Appendix C).

3 Results and Discussion

3.1 Desktop Review

3.1.1 Recent Climatic Conditions and Precipitation Data

Recent precipitation data was compared with historic precipitation data from a 29-year dataset (1971-2000) from a nearby weather station (Racine, WI) to determine if normal hydrologic and climatic conditions were present on-site during the delineation. When compared to the WETS Station data, the observed precipitation data from three months prior to the delineation indicated normal precipitation conditions at the time of the delineation. The month of July was prorated for half the month. The antecedent hydrologic condition analysis is provided below:

		Long-term rainfall records (1971-2000)							
WETS Station Racine, WI	Month	<30%	Mean	>30%	Actual	Condition	Condition Value	Month Weight Value	Condition Value X Month Weight
3rd Prior Month	May	1.92	3.23	3.92	6.61	Wet	3	1	3
2nd Prior Month	June	2.46	3.68	4.4	7.06	Wet	3	2	6
1st Prior Month	July	1.32	1.79	2.1	1.2	Dry	1	3	3
								Sum:	12
							Conditions Onsite:		Normal

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

Condition Values:
(1) Dry
(2) Normal
(3) Wet

3.1.2 Topography

The survey area for this project is discontinuous. A review of the USGS Topographical Map (Figure 2) for this project corridor shows rolling hills towards the western portion of the survey area, becoming increasingly irregular to the east. Wetland complexes are evident along much of the route, and the Pike River intersects the survey area in one of the southern portions.

3.1.3 Soil Survey

The USDA-NRCS Web Soil Survey Maps (Figure 3) identified 17 soil types, three of which are considered hydric (water is unranked), within the survey boundaries. The WDNR Surface Water Data Viewer layer was also reviewed to further investigate the area. Areas where hydric soil indicators exist were given priority; however data points were collected in all areas as necessary despite existing hydric rating if wetland hydrological or topographical characteristics were present. A summary of mapped soil types and their hydric and wetland soil indicator status are outlined in Table 3-1 below.

Table 3-1 Mapped Soil Units

Symbol	Map Unit Name	Hydric Rating	Acreage	Percent of Project Area
AtA	Ashkum silty clay loam, 0 to 2 percent slopes	Hydric	7.5	7.61%
Ac	Adrian muck	Hydric	1.34	1.36%
Am	Alluvial land	No	4.75	4.82%
AzB	Aztalan loam, 2 to 6 percent slopes	No	1.68	1.70%
BcA	Beecher silt loam, 1 to 3 percent slopes	No	0.88	0.89%

BlA	Blount silt loam, 1 to 3 percent slopes	No	2.47	2.51%
EtB	Elliott silty clay loam, 2 to 6 percent slopes	No	13.22	13.41%
MeB	Markham silt loam, 2 to 6 percent slopes	No	1.59	1.61%
MeB2	Markham silt loam, 2 to 6 percent slopes, eroded	No	4.77	4.84%
MzdB	Ozaukee silt loam, 2 to 6 percent slopes	No	16.8	17.04%
MzdB2	Ozaukee silt loam, 2 to 6 percent slopes, eroded	No	20.55	20.85%
MzdC	Ozaukee silt loam, 6 to 12 percent slopes	No	0.14	0.14%
MzdC2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	No	1.21	1.23%
Na	Navan silt loam	Hydric	0.91	0.92%
SzB	Symerton loam, 2 to 6 percent slopes	No	3.24	3.29%
VaB	Varna silt loam, 2 to 6 percent slopes	No	17.49	17.74%
W	Water	Unranked	0.03	0.03%
Total			**98.57**	**100.00%**

3.1.4 Wisconsin Wetland Inventory

The WWI (Figure 4) was reviewed to identify potential wetlands mapped within the boundaries of the project corridor. Areas where mapped wetland features exist were given priority; however data points were collected in all areas as necessary despite existing mapped wetland features if wetland hydrological, topographical, or vegetative characteristics were present. The WWI data identified the approximately 3.97 acres of wetlands outlined in the table below. A summary of mapped WWI wetlands is outlined in Table 3-2 below.

Table 3-2 Mapped WWI Wetlands

Symbol	Wetland Type	Square Feet	Acreage	Percent of Project Area
T3/W0H	Forested, Open water, Broad-leaved deciduous, Subclass unknown, Standing water, Palustrine	6,098.40	0.14	3.53%
T3K	Forested, Broad-leaved deciduous, Wet soil, Palustrine	68,389.20	1.57	39.55%
E2K	Emergent/wet meadow, Narrow-leaved persistent, Wet soil, Palustrine	7,405.20	0.17	4.28%
S3/E1K	Scrub/shrub, Emergent/wet meadow, Broad-leaved deciduous, Persistent, Wet soil, Palustrine	50,529.60	1.16	29.22%
F0Kf	Flats/unvegetated wet soil, Subclass unknown, Wet soil, Palustrine	11,325.60	0.26	6.55%
S3/E2K	Scrub/shrub, Emergent/wet meadow, Broad-leaved deciduous, Narrow-leaved persistent, Wet soil, Palustrine	29,185.20	0.67	16.88%
Total		**172,933**	**3.97**	**100.00%**

3.2 General Site Conditions

The project corridor is roadside and consists primarily of row crop agriculture with suburban and farm housing, becoming increasingly urban towards the east end of the project area. Upland areas are dominated by European grasses and agricultural ruderals.

3.2.1 Wetlands

Based on this field investigation and desktop review of related resource maps, it is our professional opinion that twenty-five wetland complexes containing twenty-eight wetland communities totaling 5.20 acres and two waterways are located within the project corridor. These features are further described below

A total of twenty-eight wetland communities were identified within the project corridor (Figure 5) and were assigned community types according to WisDOT classification (Appendix C). The wetlands that were identified were generally located in lowland areas where water tends to collect and drain more slowly, such as in roadside ditches. Factors in determining wetland boundaries included topography of the landscape, dominant vegetation, soil, and hydrology observation. Documentation of these features, including wetland community type, associated data points, observed hydrology and hydric soil indictors, and dominant vegetation may be found in the wetland determination forms found in Appendix B, while general descriptions for observed wetland communities are found in Table 3-3 below.

3.2.1.1 Wet Meadow

Approximately 3.18 acres (3.22% project area) of wet meadow community were identified and was the most abundant wetland type found. Dominant vegetation in the wet meadow community included spotted lady's-thumb (*Persicaria maculosa*), redroot amaranth (*Amaranthus retroflexus*), late goldenrod (*Solidago gigantea*), uptight sedge (*Carex stricta*), and hybrid cattail (*Typha* X *glauca*). In addition, non-dominant vegetation observed included large barnyard grass (*Echinochloa crus-galli*), reed canary grass (*Phalaris arundinacea*), swamp milkweed (*Asclepias incarnata*), European buckthorn (*Rhamnus cathartica*), and sandbar willow (*Salix interior*). The dominant soils across the wet meadow communities ranged from loam, to clay loam to clay. Indicators of hydric soils present included Depleted Matrix (F3), Redox Dark Surface (F6), Redox Depressions (F8), and Thick Dark Surface (A12). Hydrology indicators consisted of Geomorphic Position (D2), FAC Neutral Test (D5), High Water Table (A2), and Saturation (A3).

3.2.1.2 Wooded Swamp

Approximately 1.67 acres (1.71% project area) of wooded swamp community were identified and was the second most abundant wetland type found. Vegetation in the wooded swamp community was dominated by black willow (*Salix nigra*), eastern cottonwood (*Populus deltoides*), and silver maple (*Acer saccharinum*) in the canopy layer. Shrub layer vegetation consisted of species such as European buckthorn (*Rhamnus cathartica*), and hairy-stem gooseberry (*Ribes hirtellum*). Herbaceous vegetation was often sparse or was similar to wet meadow vegetation. Dominant soils across the wooded swamps ranged from clay loam to clay. The most common hydric soils indicators for these areas were found to be Thick Dark Surface (A12) and Redox Dark Surface (F6). Hydrology indicators consisted of Geomorphic Position (D2), FAC Neutral Test (D5), High Water Table (A2), and Saturation (A3).

3.2.1.3 Shrub Scrub

Approximately 0.24 acres (0.24% project area) of shrub scrub community were identified and was the third most abundant wetland type found. Dominant vegetation in the shrub scrub community included sandbar willow (*Salix interior*), gray dogwood (*Cornus racemosa*), and boxelder (*Acer negundo)*. Dominant herbaceous vegetation consisted of late goldenrod (*Solidago gigantea*),

river-bank grape (*Vitis riparia*), and jewelweed (*Impatiens capensis*). In- addition, non-dominant vegetation observed included hairy-stem gooseberry (*Ribes hirtellum*), reed canary grass (*Phalaris arundinacea*), and indian-hemp (*Apocynum cannabinum*). Dominant soils across the shrub scrub community type ranged from silty clay loam to loam to clay loam. The most common hydric soil indicators observed in this community were Depleted Below Dark Surface (A11) and Depleted Matrix (F3). Hydrology indicators consisted of Geomorphic Position (D2) and FAC Neutral Test (D5).

3.2.1.4 Shallow Marsh

Approximately 0.11 acres (0.11% project area) of shallow marsh community were identified and was the least abundant wetland type found. Dominant vegetation included hybrid cattail (*Typha* X *glauca*), with reed canary grass (*Phalaris arundinacea*) usually present. Dominant soils across the wooded swamps ranged from clay loam to clay. The most common hydric soil indicators observed in this community were Thick Dark Surface (A12) and Redox Dark Surface (F6). Hydrology indicators consisted of Geomorphic Position (D2), FAC Neutral Test (D5), High Water Table (A2), and Saturation (A3).

Table 3-3 Delineated Wetland Summary Table

Wetland ID	Wetland Type	Square Feet	Acres
W-15	Wet Meadow (M)	196.02	0.00
W-16	Wooded Swamp (WS)	5,227.20	0.12
W-17	Wooded Swamp (WS)	13,503.60	0.31
W-18	Shrub Scrub (SS)	740.52	0.02
W-19	Wet Meadow (M)	522.72	0.01
W-20	Wet Meadow (M)	261.36	0.01
W-21	Shrub Scrub (SS)	9,583.20	0.22
W-22	Wooded Swamp (WS)	1,306.80	0.03
W-23	Wet Meadow (M)	14,810.40	0.34
W-24	Wet Meadow (M)	4,356.00	0.10
W-25	Wet Meadow (M)	5,227.20	0.12
W-26	Wet Meadow (M)	12,196.80	0.28
W-27	Wet Meadow (M)	8,712.00	0.20
W-28	Wet Meadow (M)	16,117.20	0.37
W-28	Shallow Marsh (SM)	3,484.80	0.08
W-28	Wooded Swamp (WS)	19,602.00	0.45
W-29	Wooded Swamp (WS)	9,147.60	0.21
W-30	Wet Meadow (M)	8,712.00	0.20
W-31	Wet Meadow (M)	5,227.20	0.12
W-32	Wet Meadow (M)	32,234.40	0.74
W-33	Wet Meadow (M)	10,454.40	0.24
W-34	Wet Meadow (M)	174.24	0.00
W-35	Wet Meadow (M)	1,524.60	0.04
W-36	Wooded Swamp (WS)	23,958.00	0.55
W-37	Wet Meadow (M)	2,395.80	0.06
W-38	Wet Meadow (M)	13,503.60	0.31
W-38	Shallow Marsh (SM)	1,393.92	0.03
W-39	Wet Meadow (M)	2,003.76	0.05
Total		**226,577.34**	**5.20**

3.2.2 Naturally Problematic and Significantly Disturbed Wetlands

Based on the guidance provided in Section 5, Difficult Wetland Situations in the Midwest Region, of the Regional Supplement to the USACE Delineation Manual: Midwest Region, Version 2.0, it was determined that several of the recorded wetland data points existed within significantly disturbed conditions. Details can be found in the wetland determination data forms in Appendix B and are also summarized in Table 3-4 below.

Table 3-4 Naturally Problematic and Significantly Disturbed Data Point Summary

Data Point ID	Naturally Problematic?	Significantly Disturbed?	Remarks
DP-37	-	Soil	Sample was located in a roadside ditch in a residential area. A restrictive layer of gravel/rock from historic road fill activities was encountered at a depth of 5". Soils at this location are considered significantly disturbed due to the presence of road fill in the profile and shallow restrictive layer.
DP-44	-	Vegetation	Sample was located in a roadside ditch. Vegetation at this location is considered naturally problematic as the road right-of-way is actively managed and had been mowed recently.
DP-51	-	Soil	Sample was located in a roadside ditch in a residential area. A restrictive layer of riprap was installed within the ditch at the surface layer and soils could not be sampled. Soils at this location are considered significantly disturbed due to the presence of riprap fill.
DP-59	Soil	-	Sample point was located in a wooded swamp within a drainage way. Soils at this location are considered naturally problematic as seasonal sedimentation has prevented identification of hydric soil indicators.

3.3 Waterways

Three water features, an unnamed stream, the Pike River, and an unnamed pond, were documented during field surveys (Figure 5). The unnamed tributary (S-01) has an ordinary high water mark (OHWM) of 10ft and a depth of 0.5ft. The bank width is 20ft with a bank depth of 2ft. The substrate is gravel and the feature is a tributary to the Pike River. The Pike River (S-02) has an OHWM of 40ft with a depth of 3.5ft. The bank width was estimated at 50ft with a bank depth of 10ft. The substrate of the Pike River was documented as Mud/Silt and it is a tributary of Lake Michigan. The pond (O-01) is a shallow water feature with a small fringe of willows and reed canary grass. Photographs of waterway features are located in Appendix A.

4 Summary and Conclusion

Cardno was contracted to perform a wetland delineation and classification of wetland resources along the County Highway KR road corridor in Racine and Kenosha Counties, Wisconsin and is in addition to previously surveyed areas along CTH KR under WisDOT work order 3763-00-04 (see previous, independent wetland report). The study limits comprise approximately 3.8 miles and vary in width up to approximately 300 feet. The entire project corridor is approximately 98.57 acres.

Based on field investigations conducted by Cardno on July 17th & 18th and 25th, 2018 and desktop review of related resource maps, it is our professional opinion that twenty-five wetland complexes totaling 5.20 acres (226,577 ft^2) and two waterways exist within the project corridor.

This report represents our best professional judgment based on our knowledge and experience. The field wetland determination and delineation was conducted within the project corridor boundary provided to Cardno. The project corridor is described generally above and is depicted on all figures that accompany this report.

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 the county, town, city or village.

5 Literature Cited

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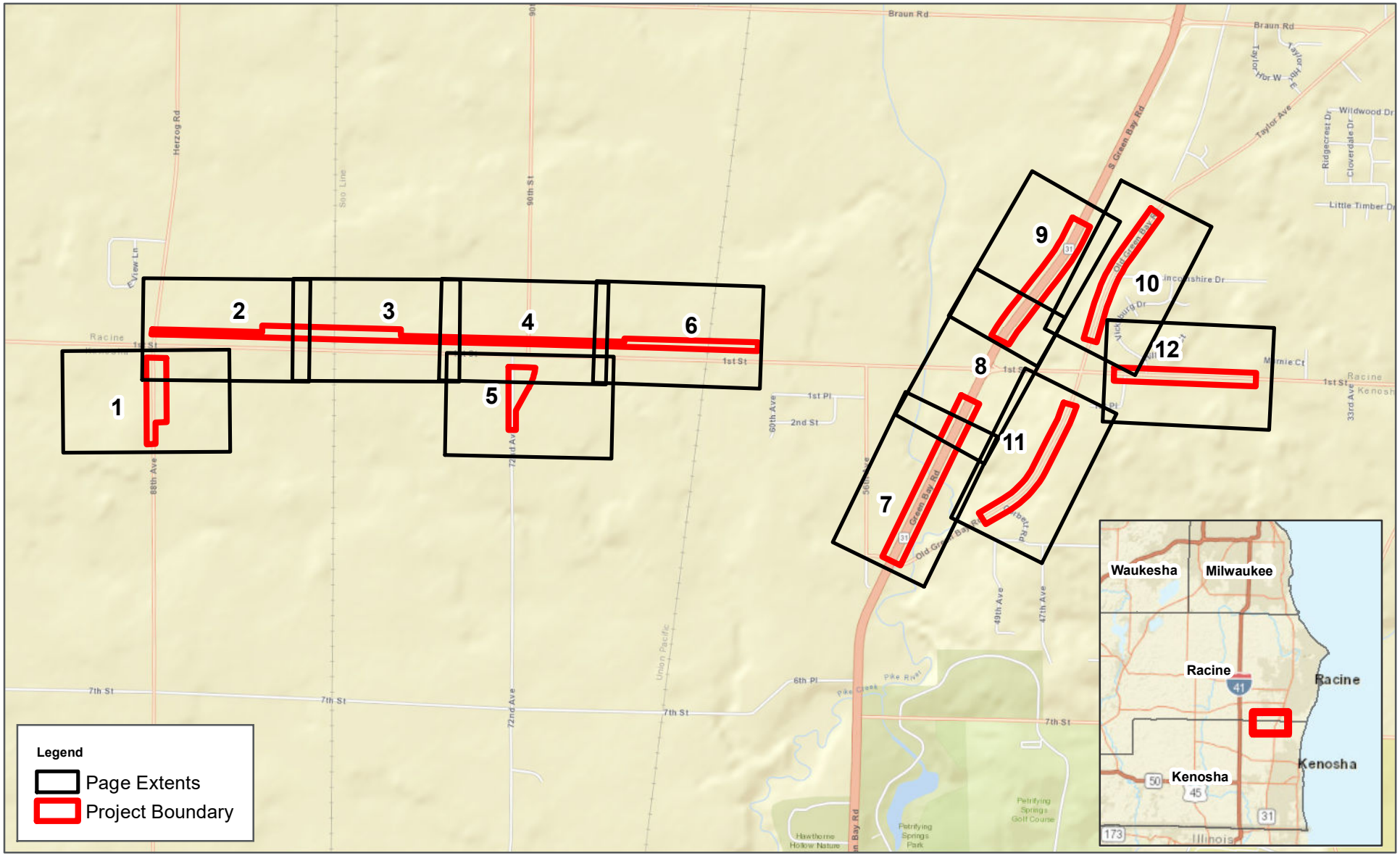
CTH KR - CTH H to Old Green Bay Rd

Figure

1

Location Map



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Location Map

County Highway KR, County Highway H to Old Green Bay Road
Wisconsin DOT
Racine and Kenosha Counties, Wisconsin

0 750 1,500 3,000
Feet

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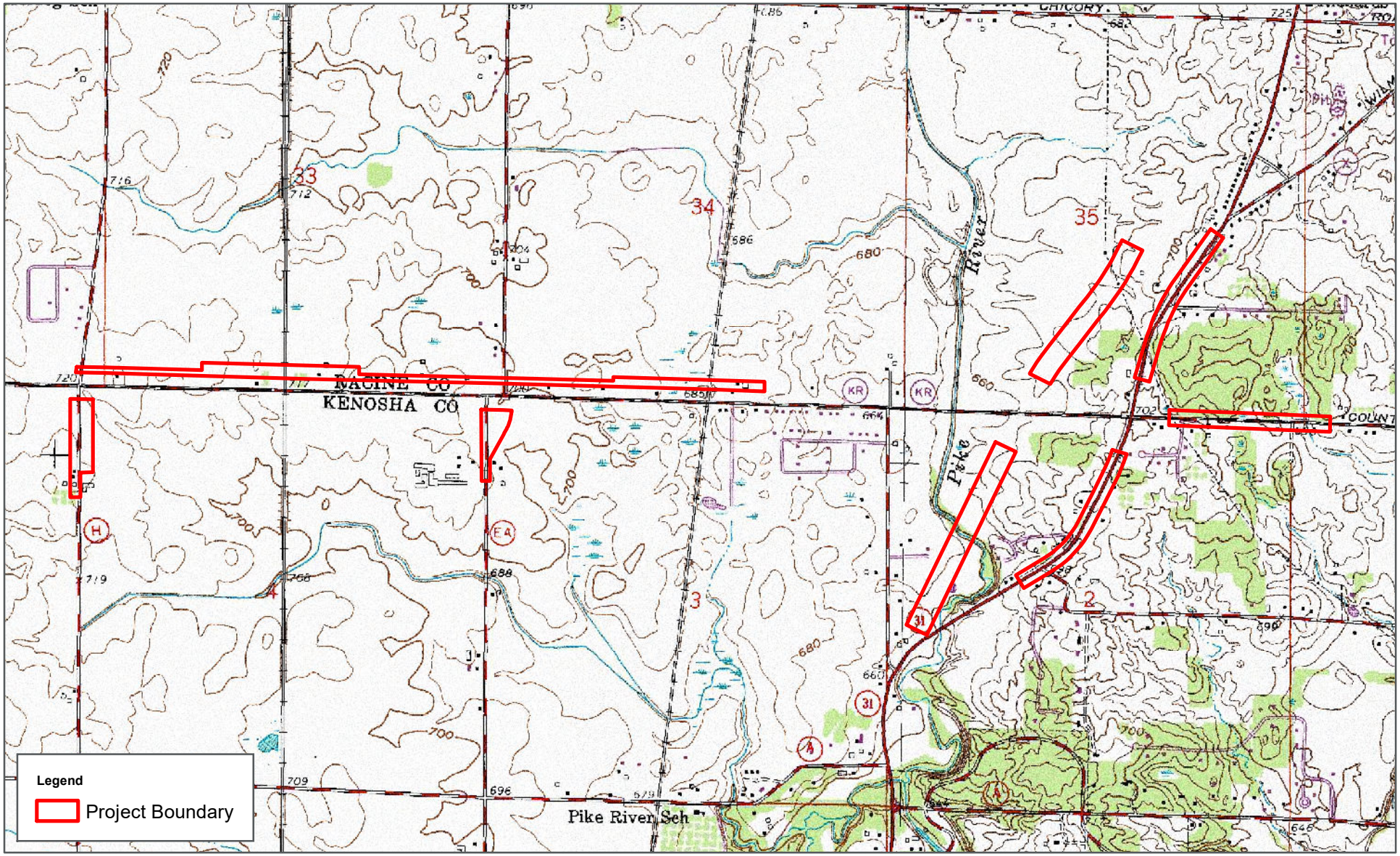
GIS Analyst: madalyn.lupinek

CTH KR - CTH H to Old Green Bay Rd

Figure

2

Topographic Map



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Topographic Map

County Highway KR, County Highway H to Old Green Bay Road
Wisconsin DOT
Racine and Kenosha Counties, Wisconsin

0 500 1,000 2,000
Feet

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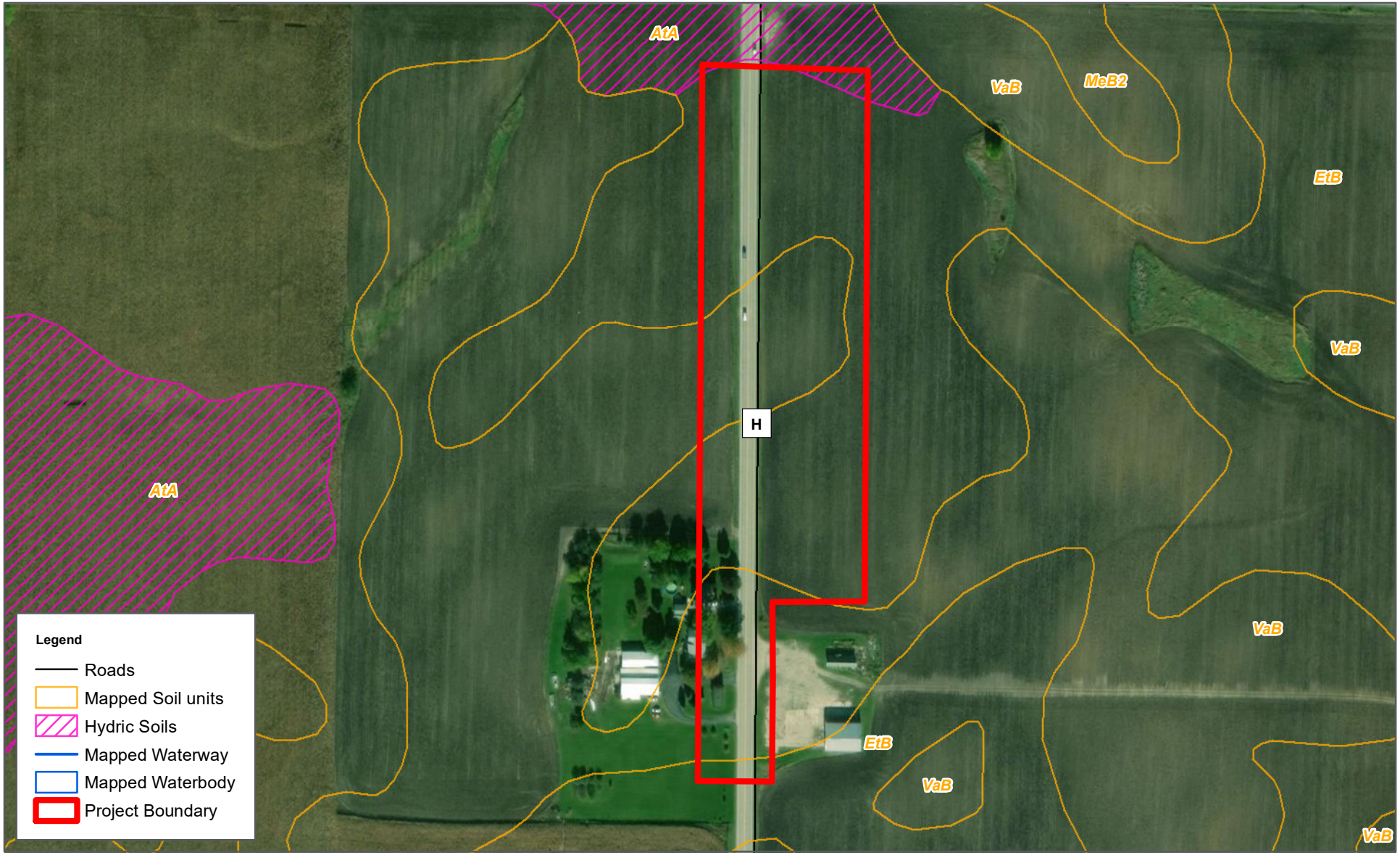
GIS Analyst: madalyn.lupinek

CTH KR - CTH H to Old Green Bay Rd

Figure

3

Mapped Soil Units



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County Highway KR, County Highway H to Old Green Bay Road
Wisconsin DOT
Racine and Kenosha Counties, Wisconsin

0 75 150 300
Feet

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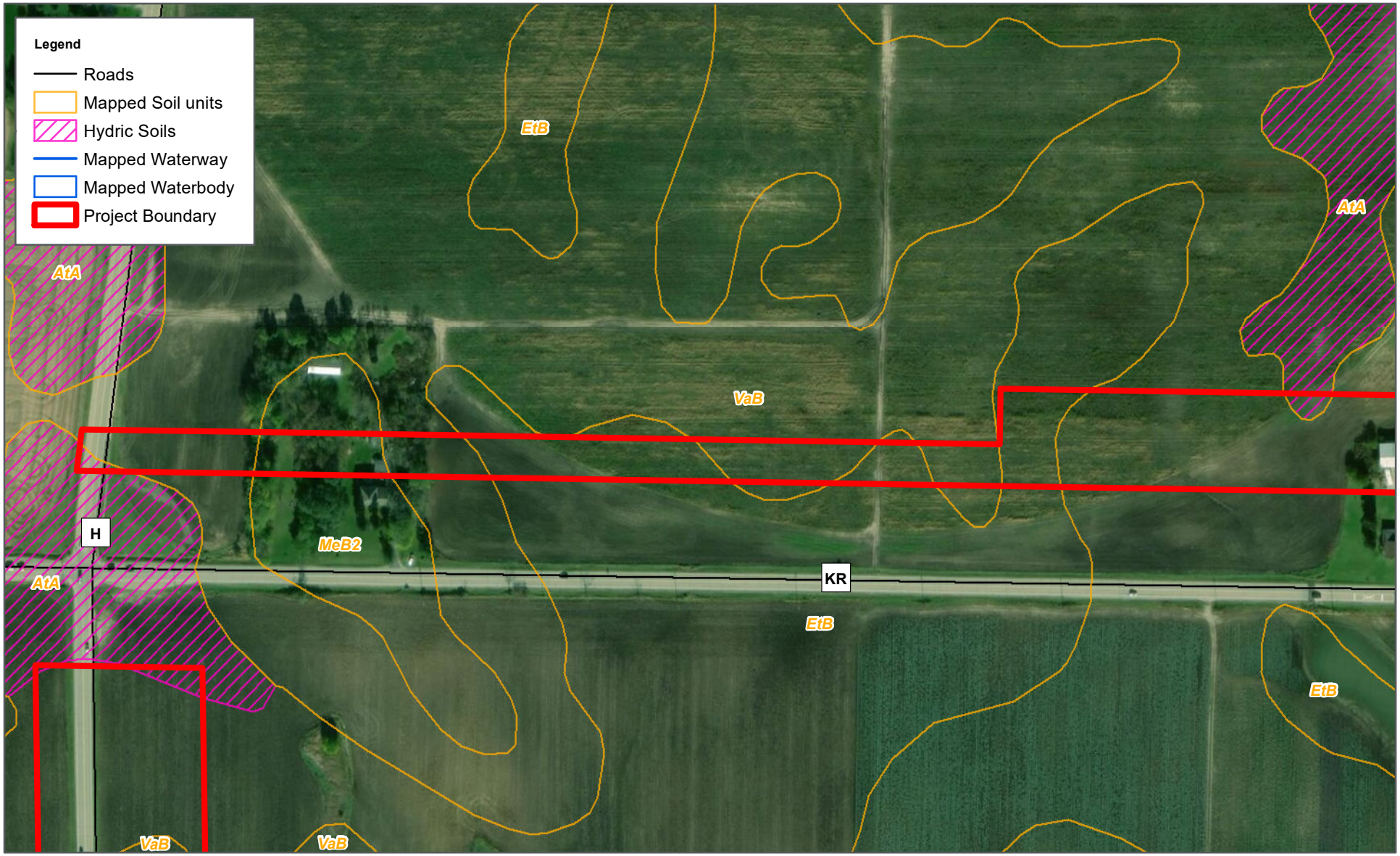
GIS Analyst: madalyn.lupinek



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Project No. J177001M18

Mapped Soil Units - Page 2 of 12

County Highway KR, County Highway H to Old Green Bay Road
Wisconsin DOT
Racine and Kenosha Counties, Wisconsin

0 75 150 300
Feet

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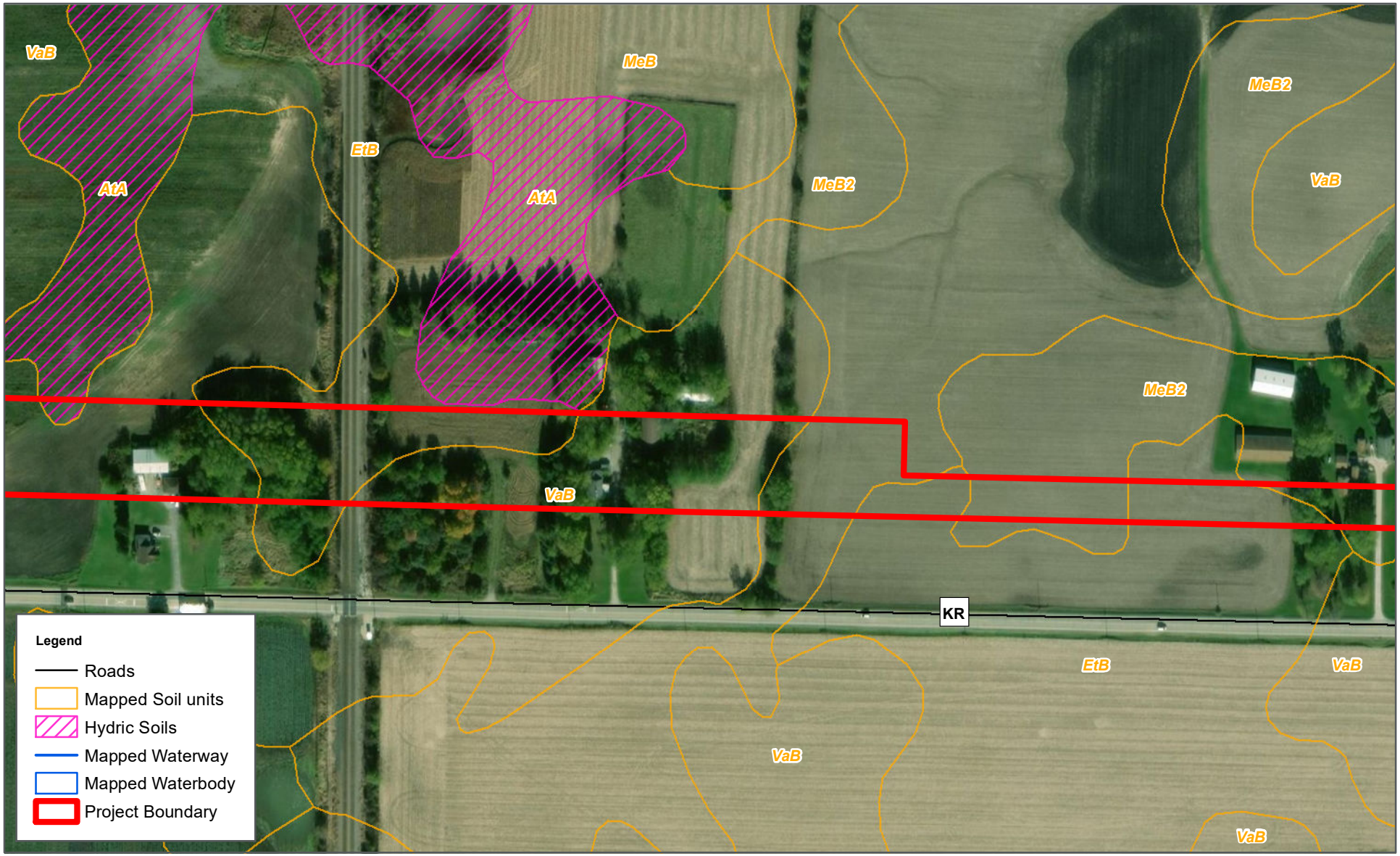
GIS Analyst: madalyn.lupinek



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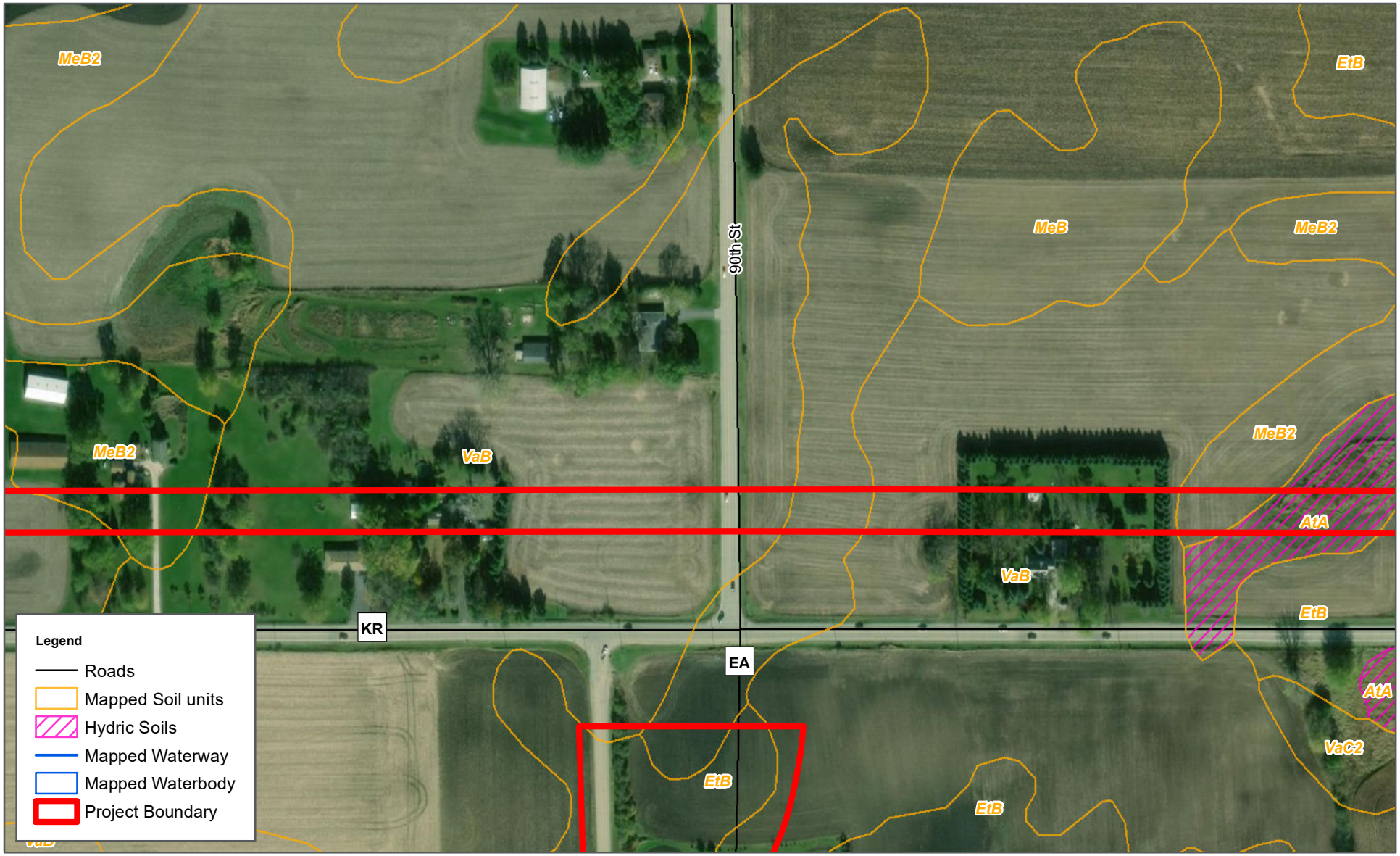

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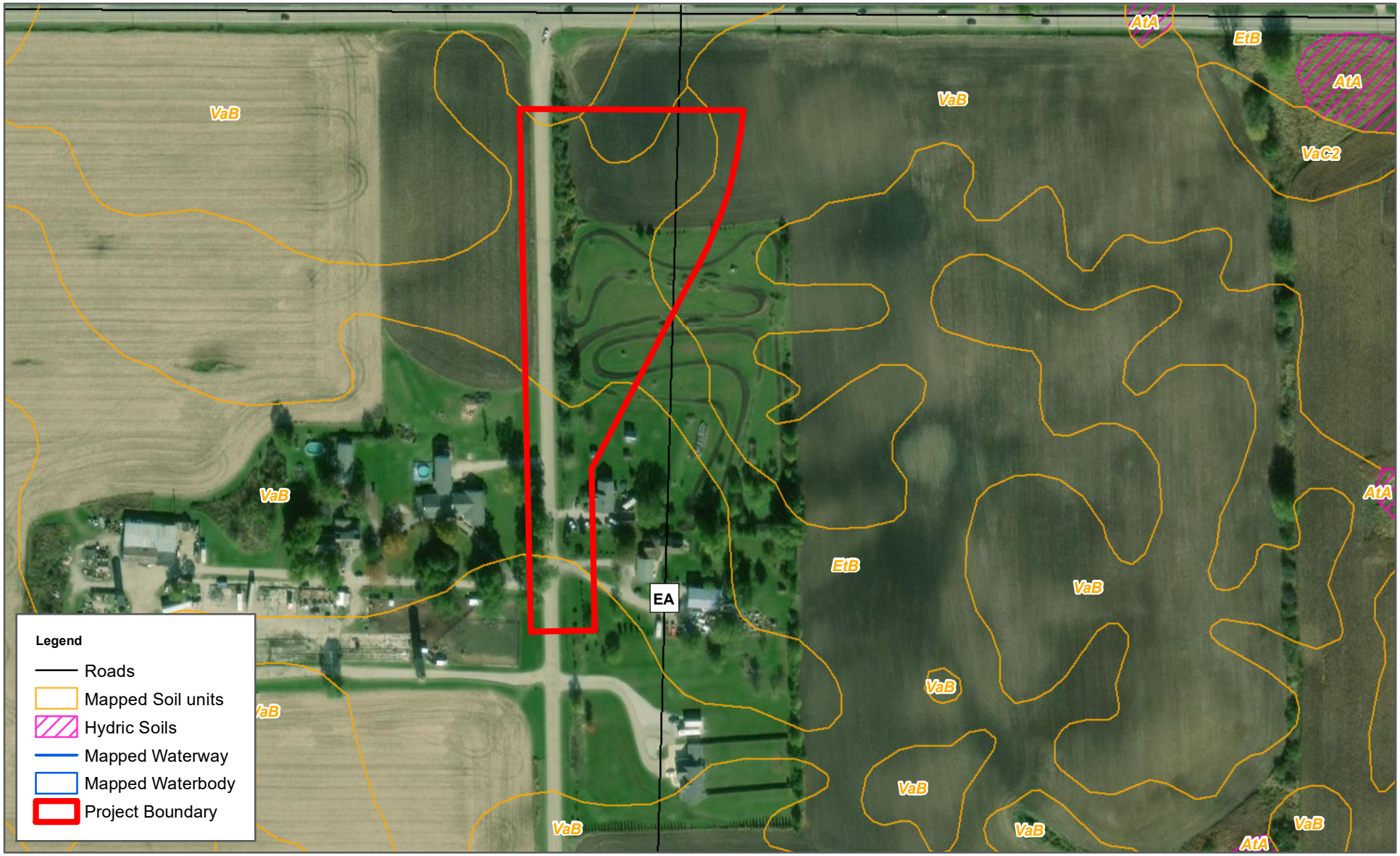

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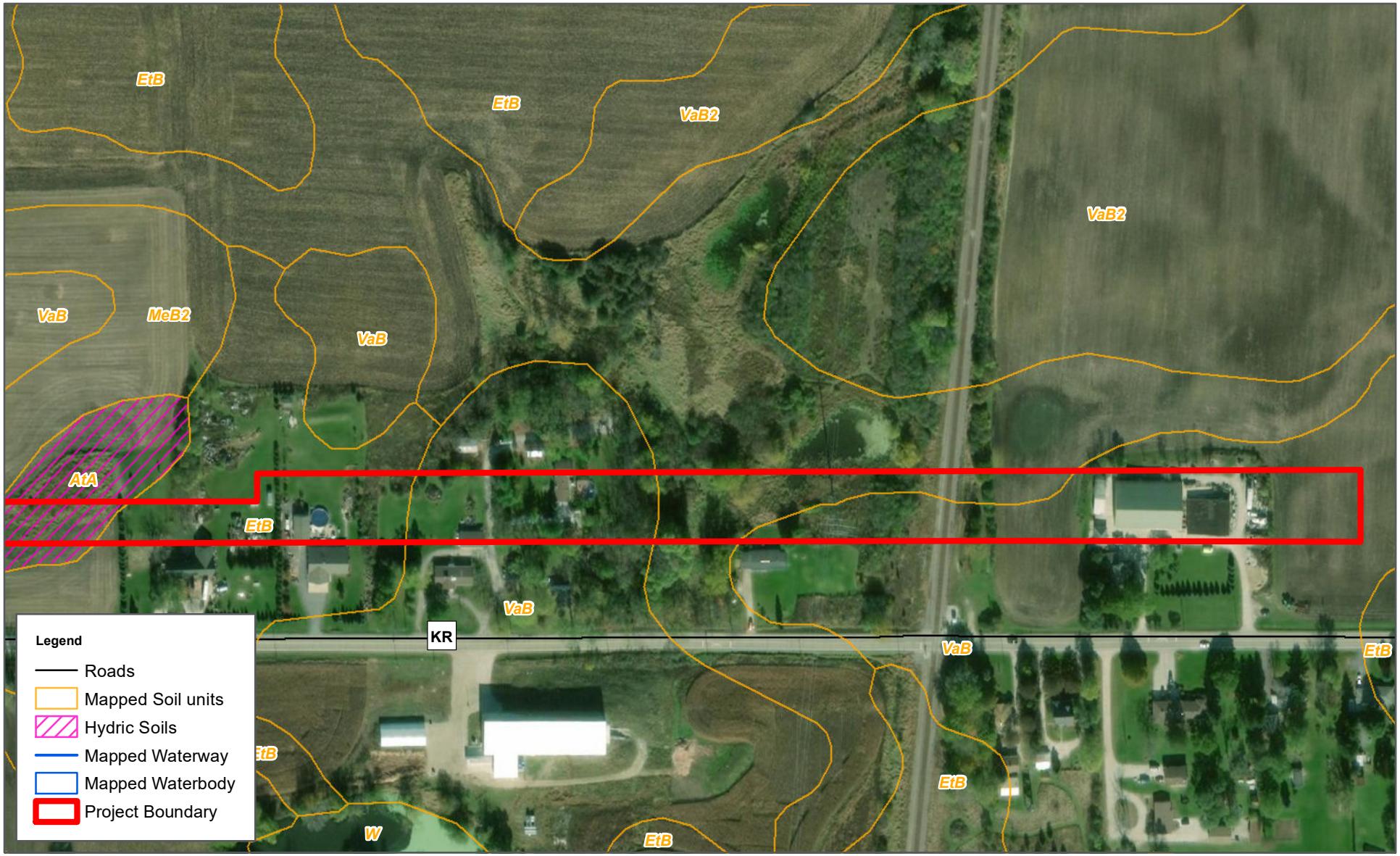

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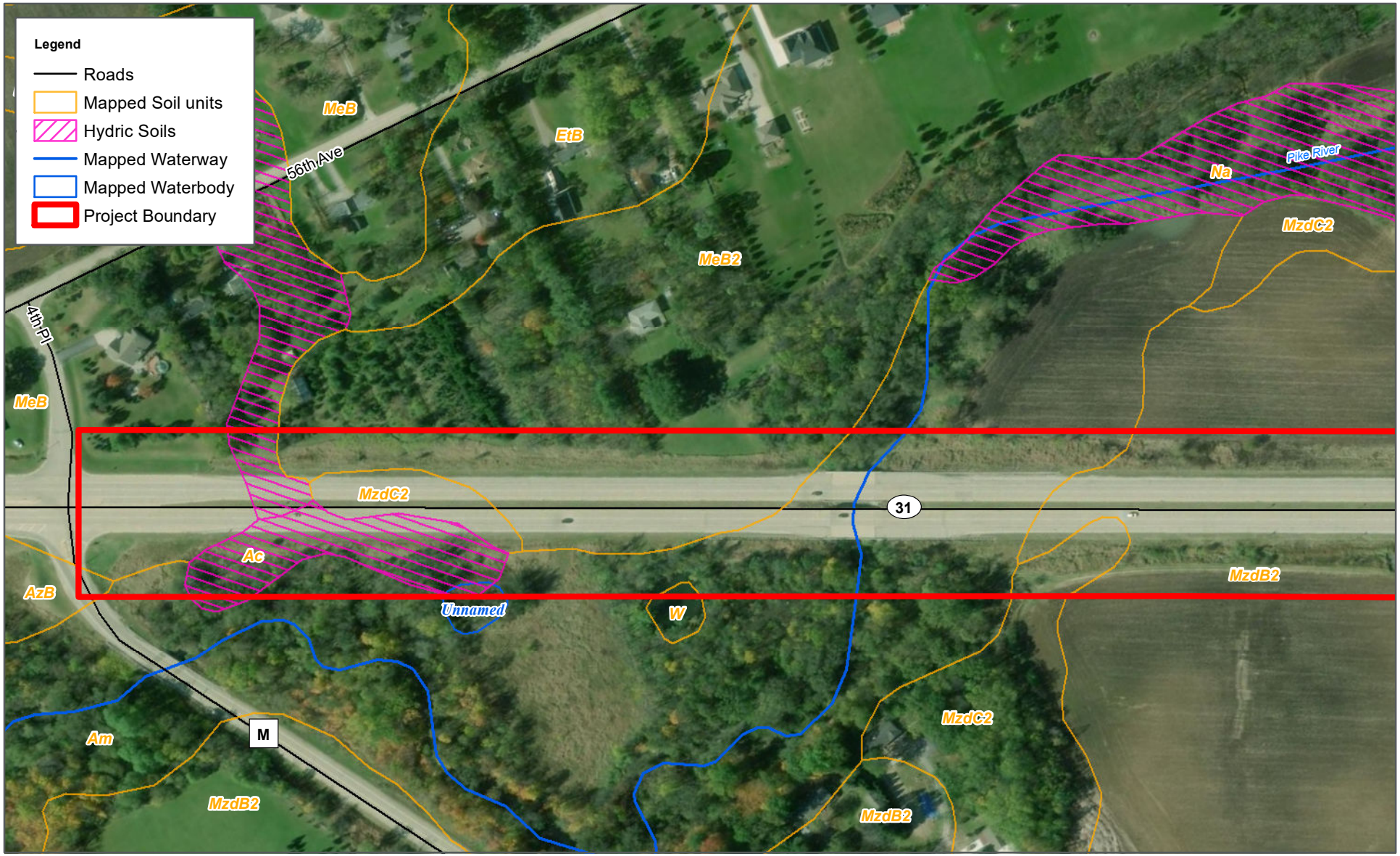

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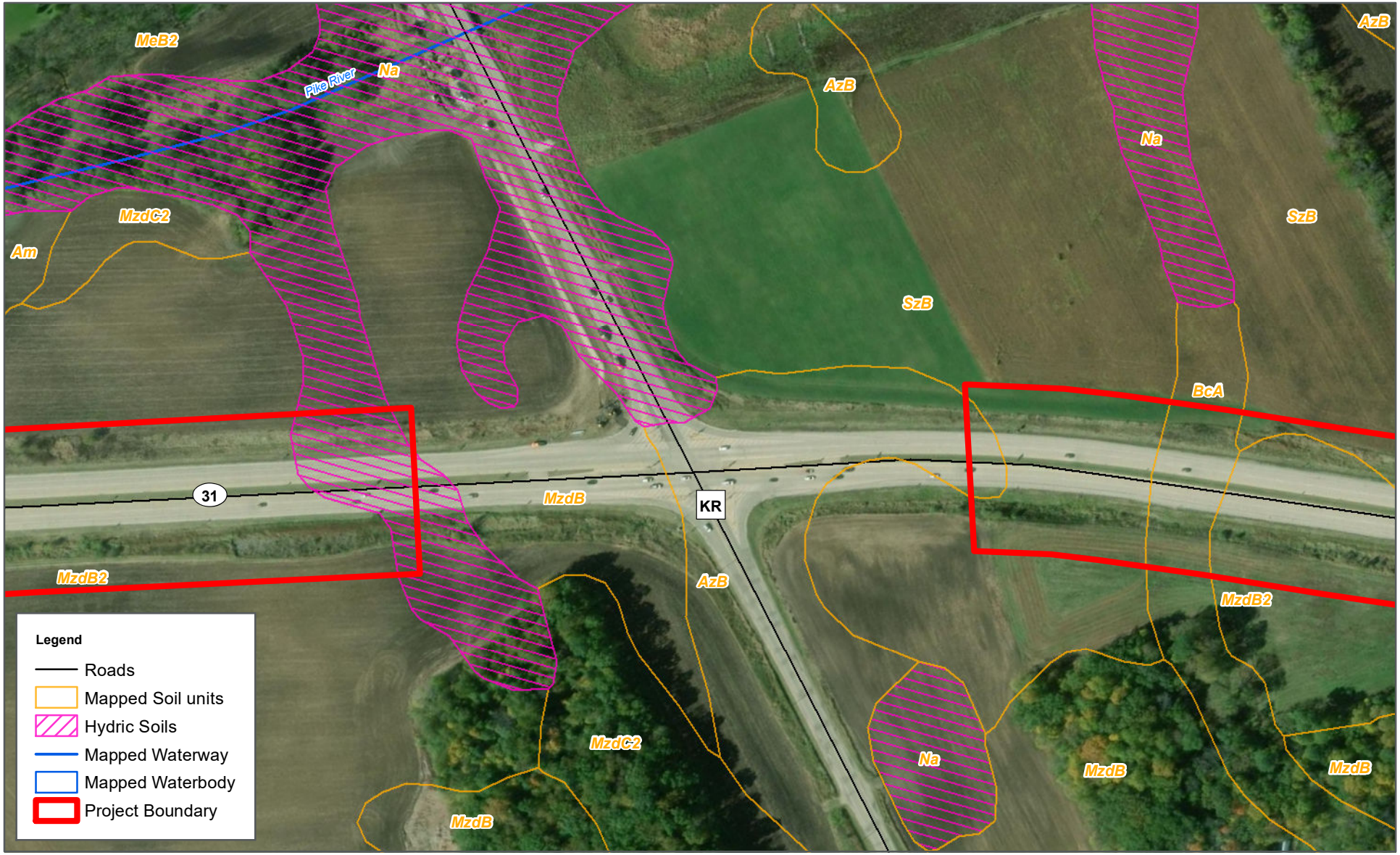

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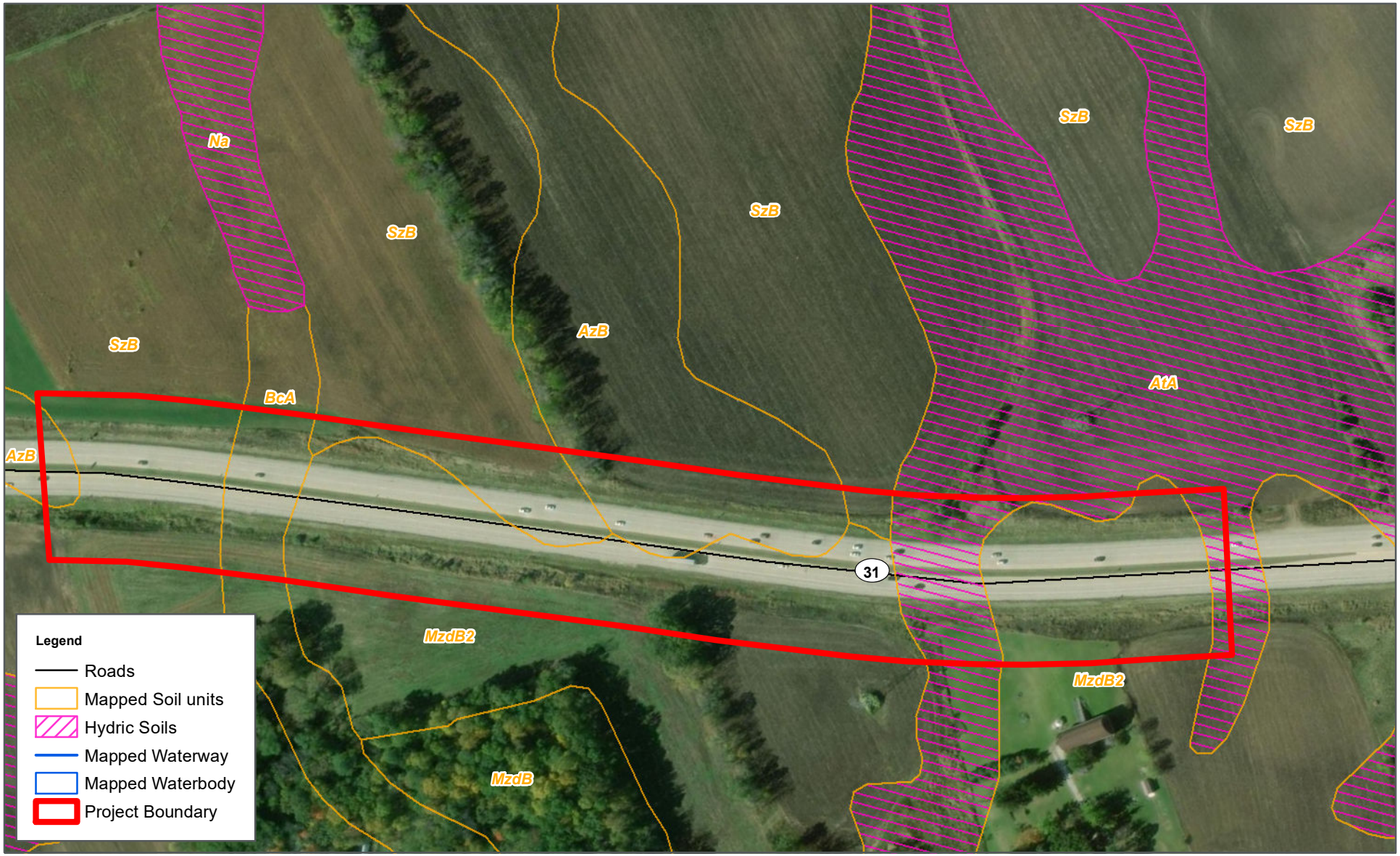

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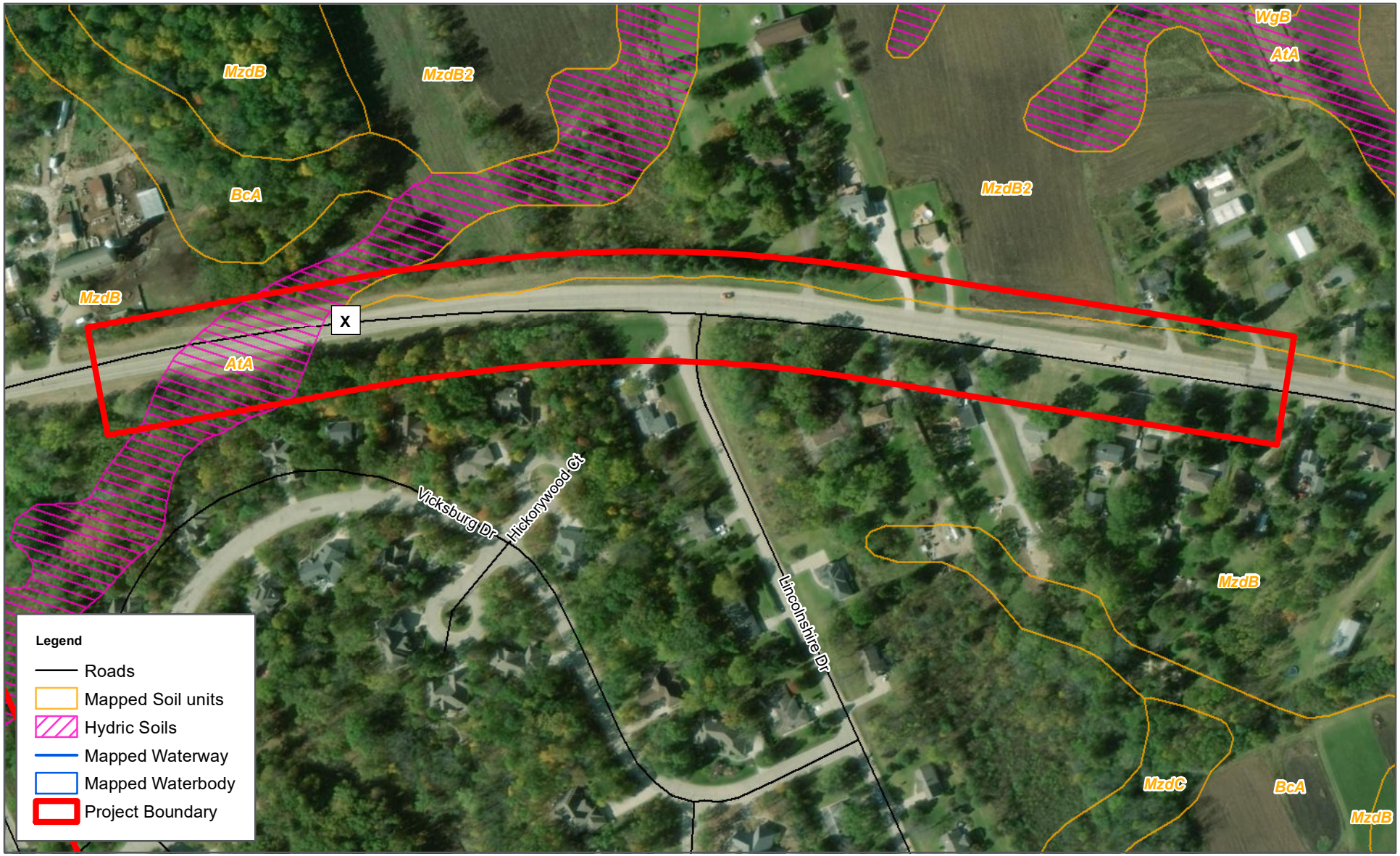

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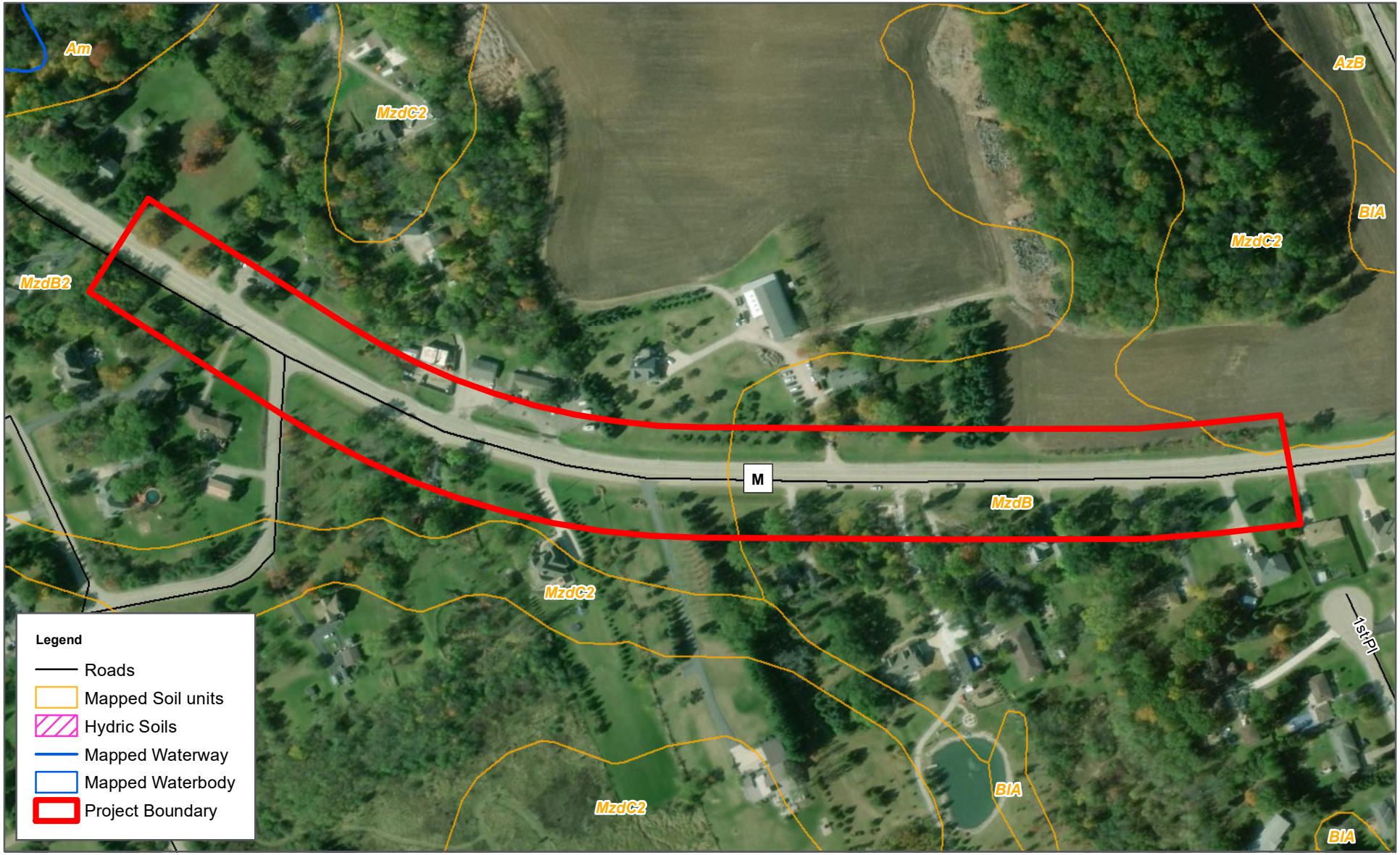

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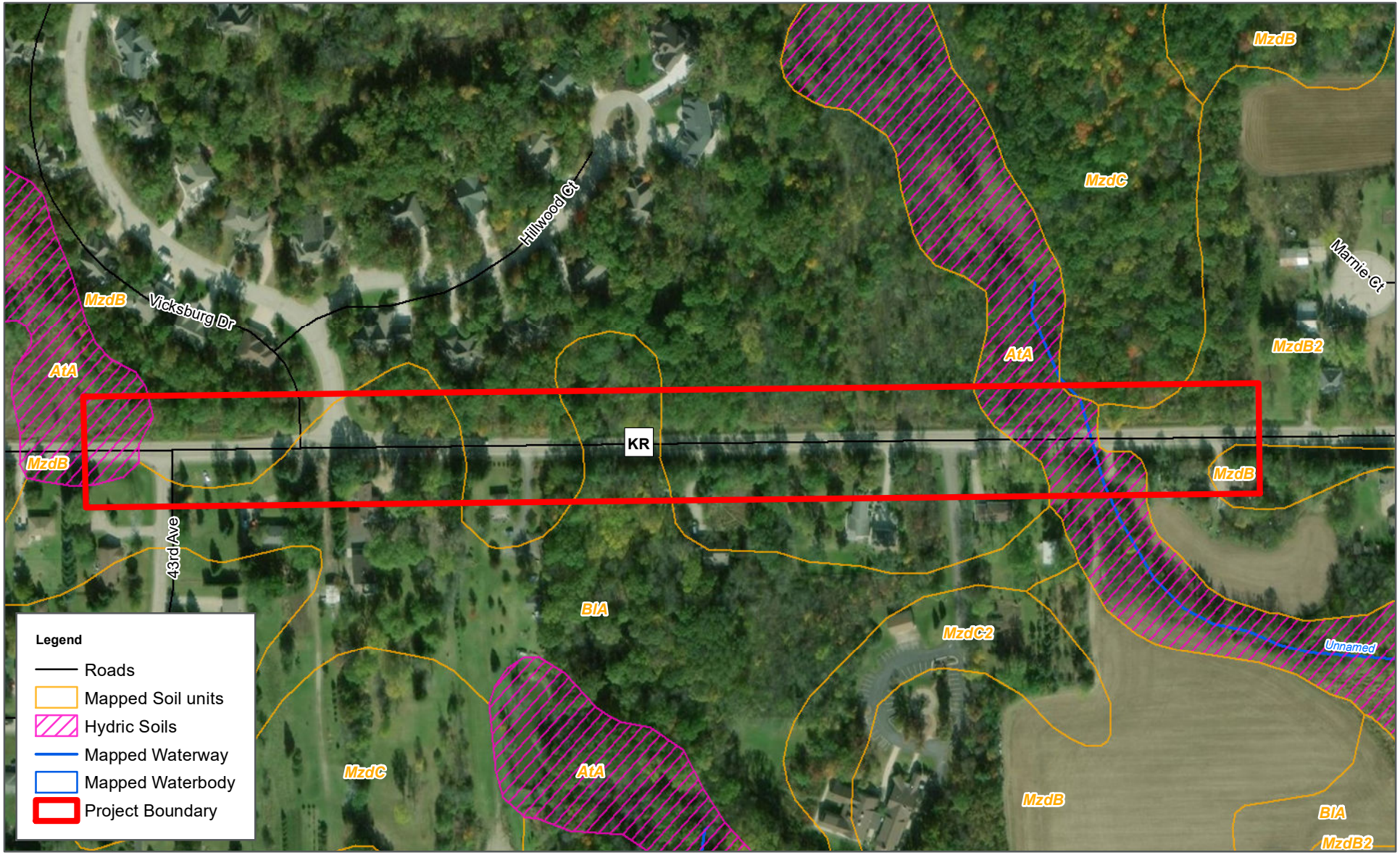

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GIS Analyst: madalyn.lupinek

CTH KR - CTH H to Old Green Bay Rd

Figure

4

Wisconsin Wetland Inventory (WWI)

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WWI Mapped Wetlands - Page 1 of 12

County Highway KR, County Highway H to Old Green Bay Road
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Racine and Kenosha Counties, Wisconsin

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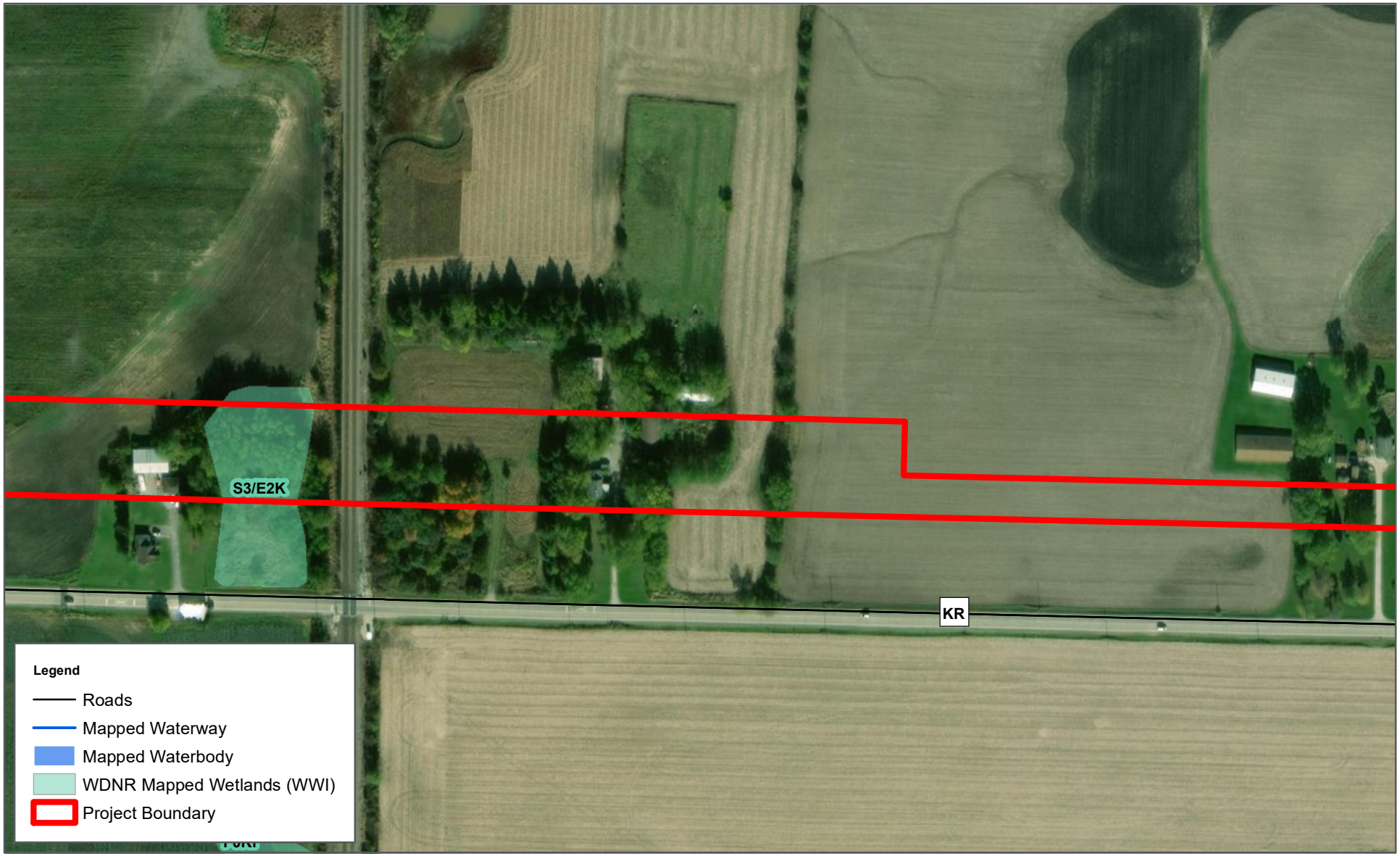

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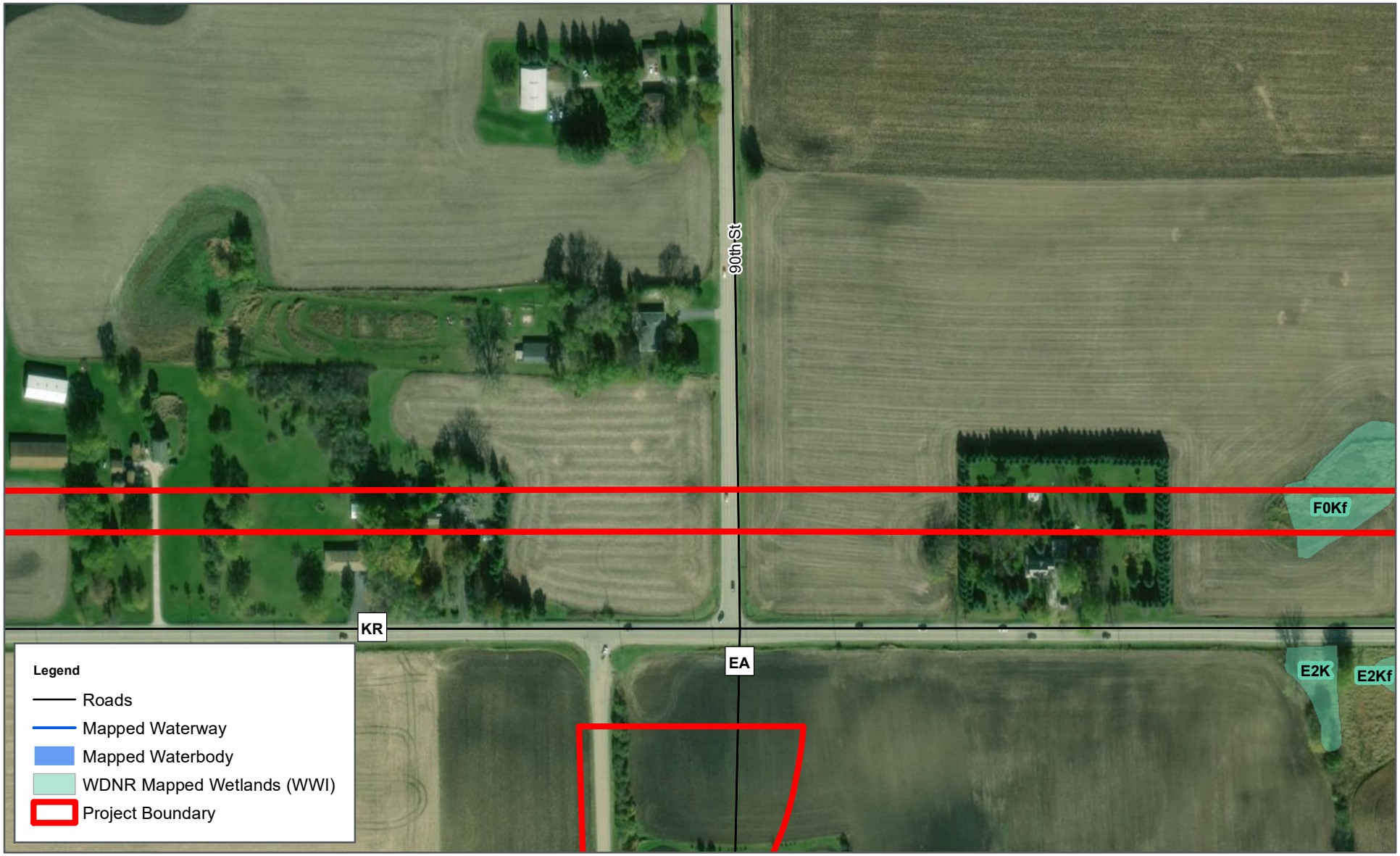

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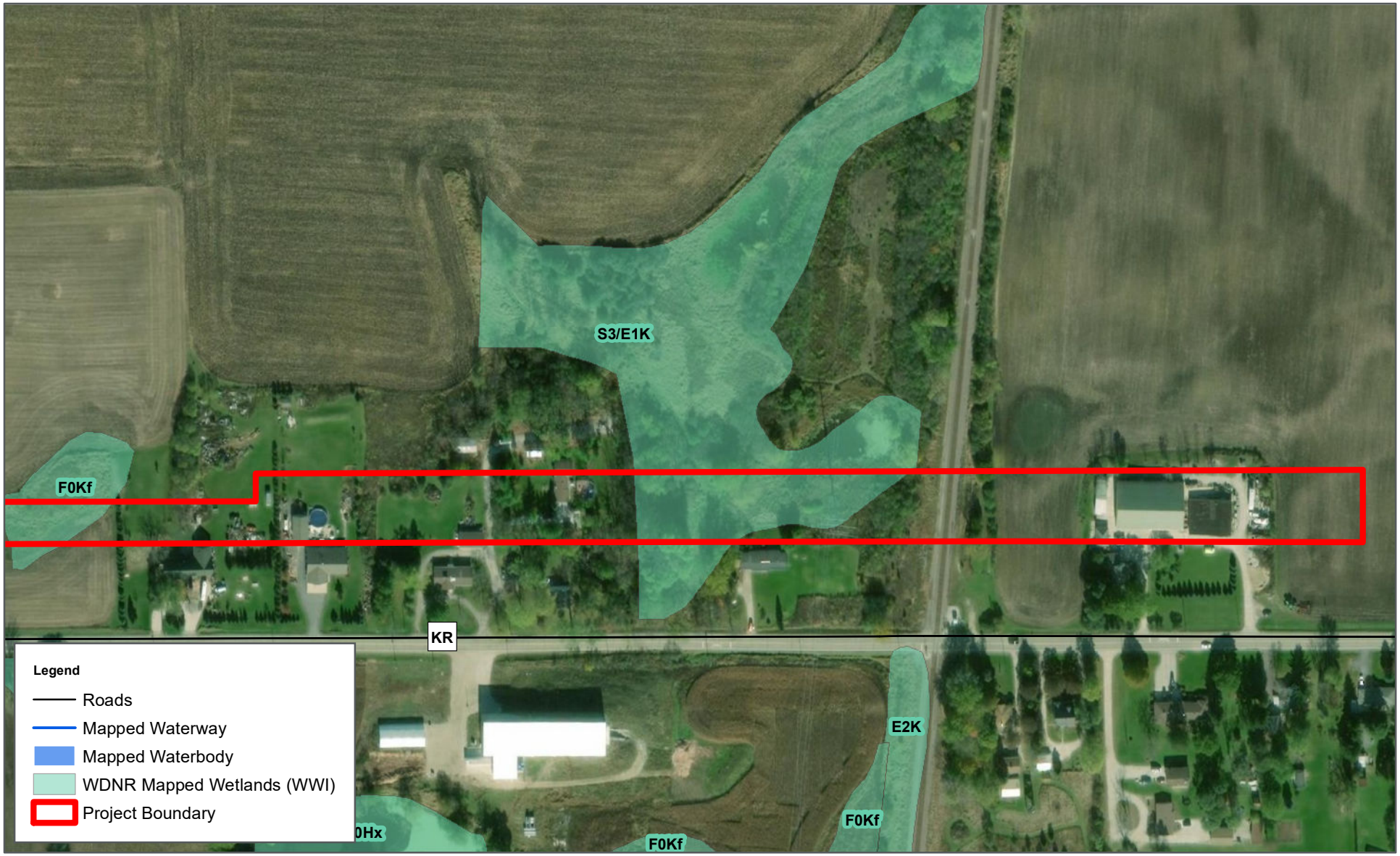

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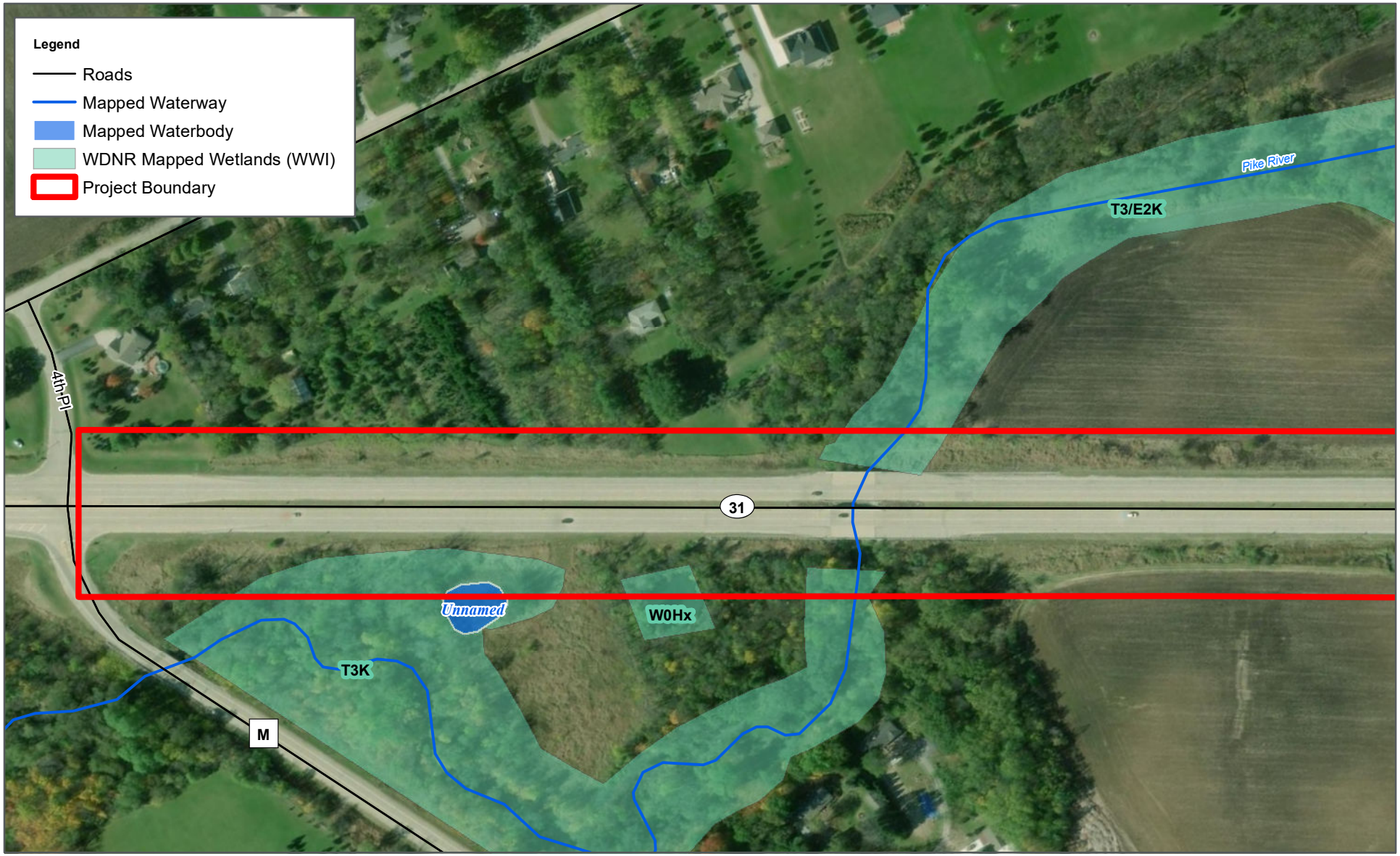

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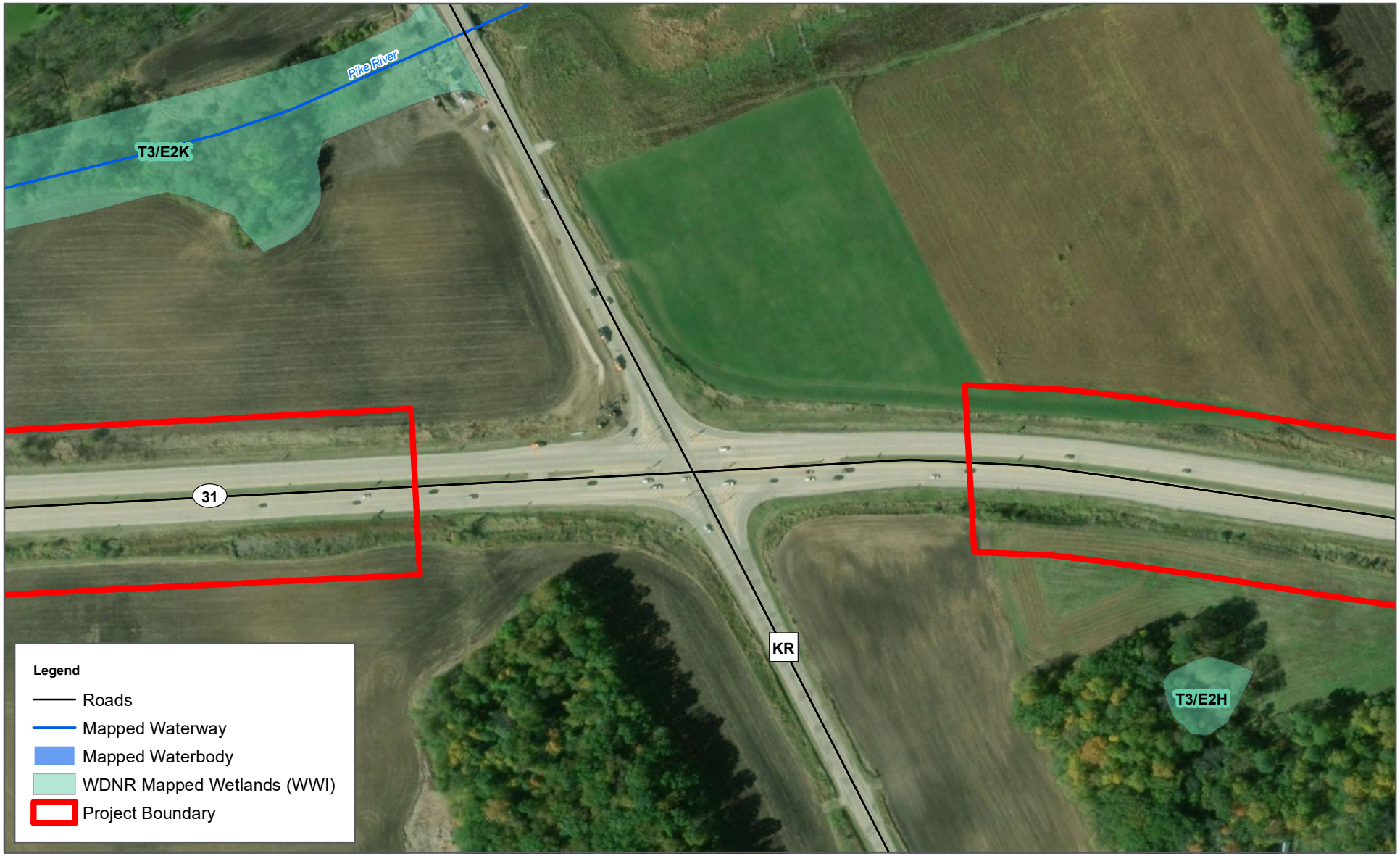

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WWI Mapped Wetlands - Page 8 of 12

County Highway KR, County Highway H to Old Green Bay Road
Wisconsin DOT
Racine and Kenosha Counties, Wisconsin

0 75 150 300
Feet

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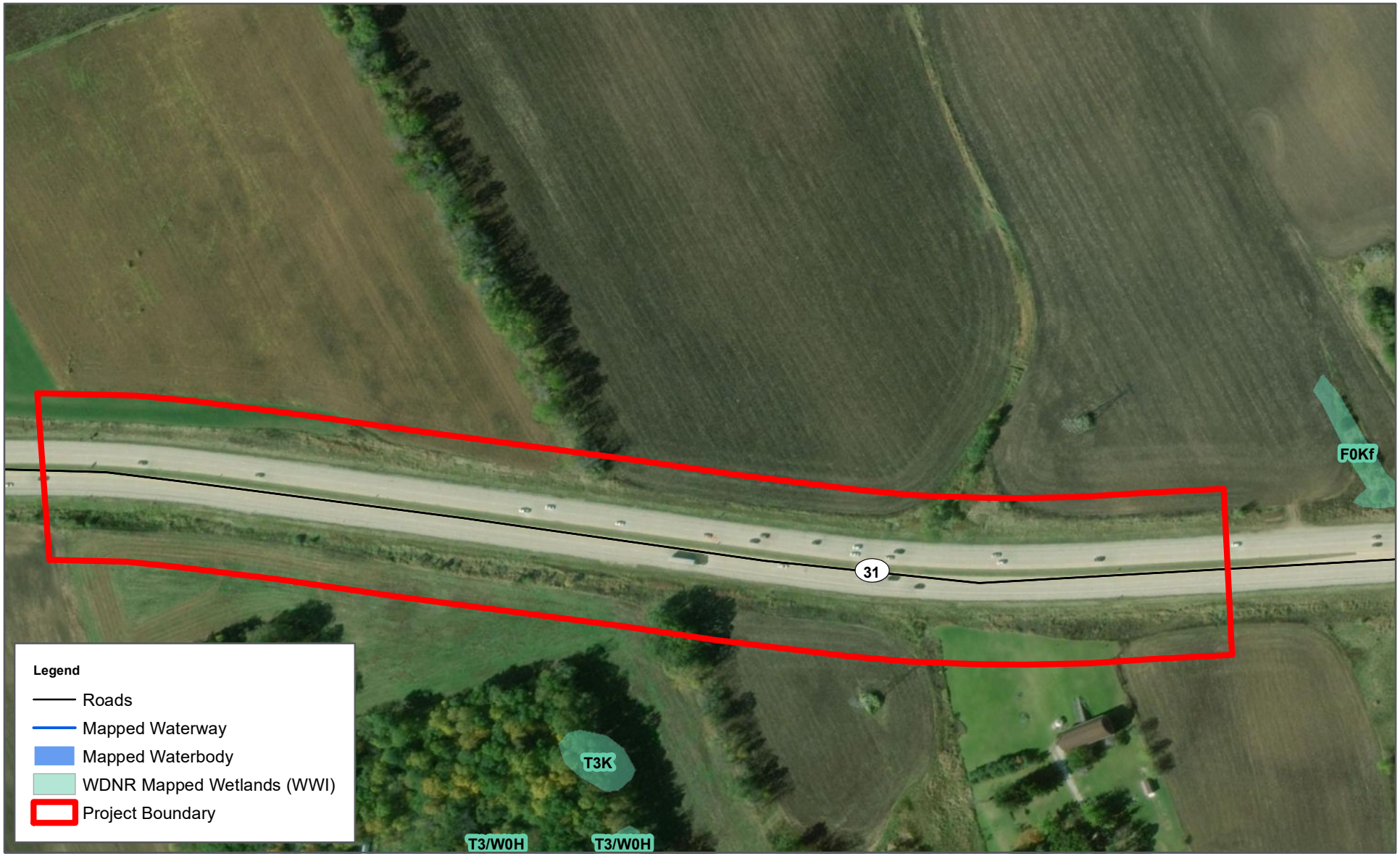
GIS Analyst: madalyn.lupinek



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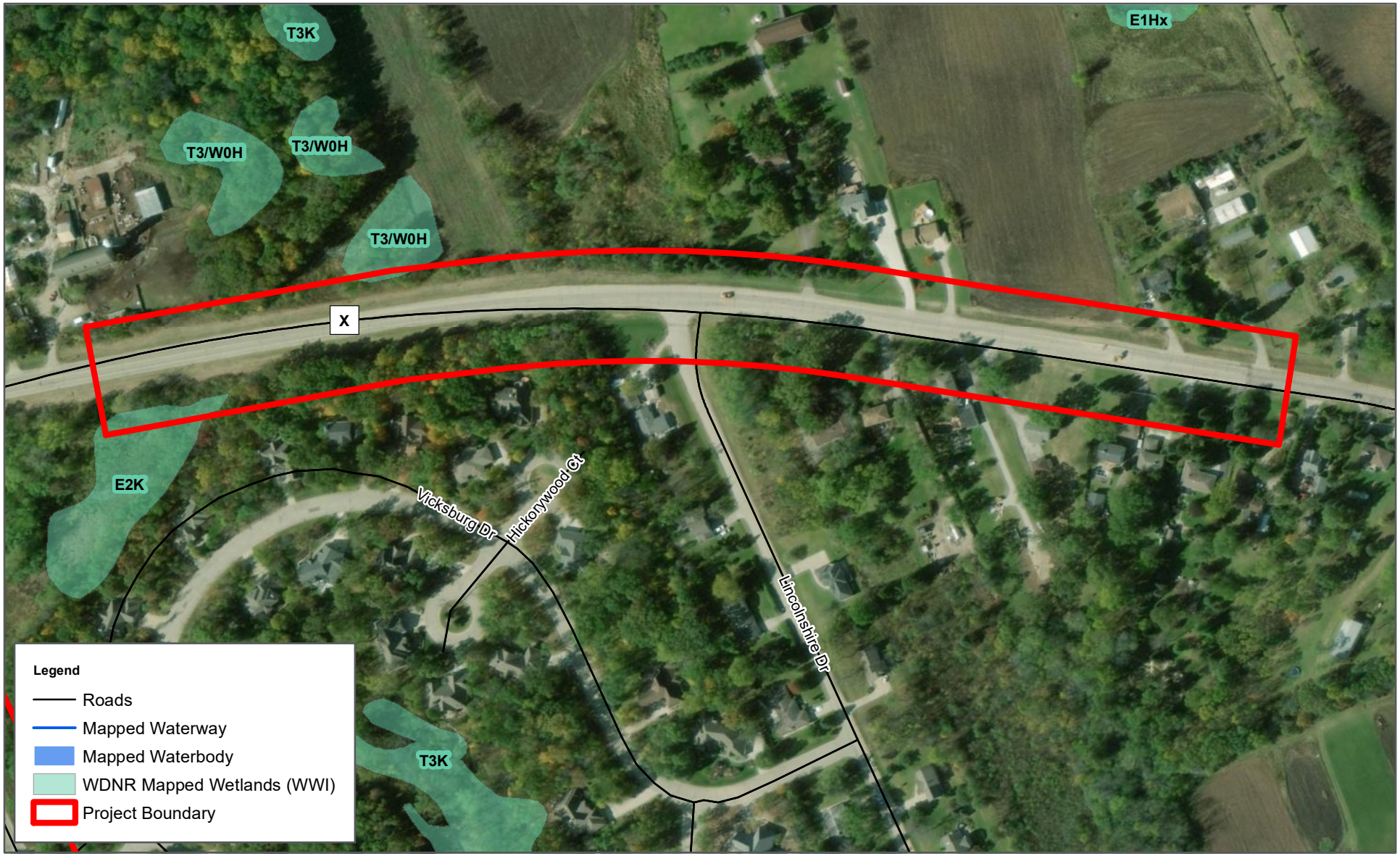

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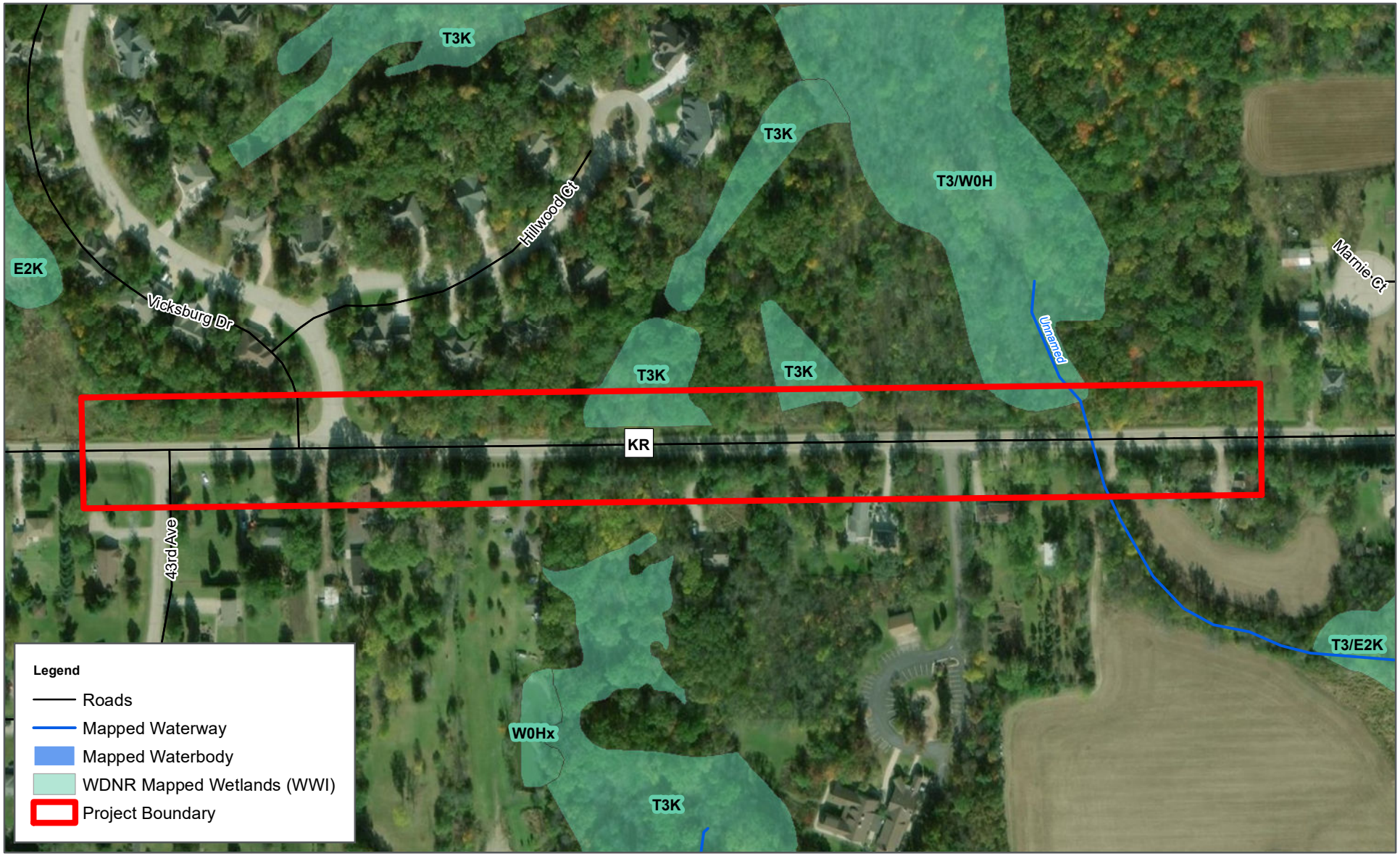

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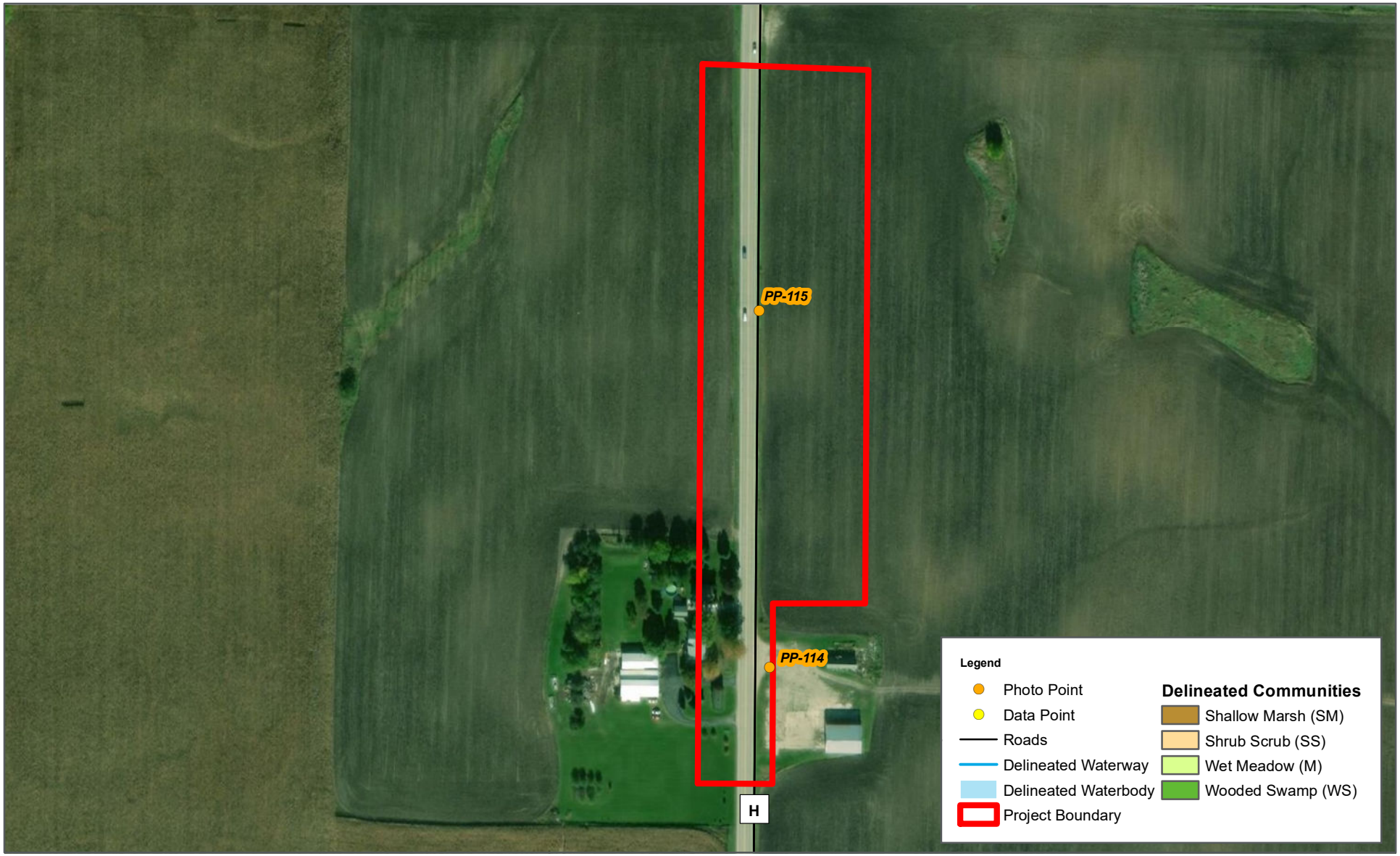
GIS Analyst: madalyn.lupinek

CTH KR - CTH H to Old Green Bay Rd

Figure

5

Wetland Delineation



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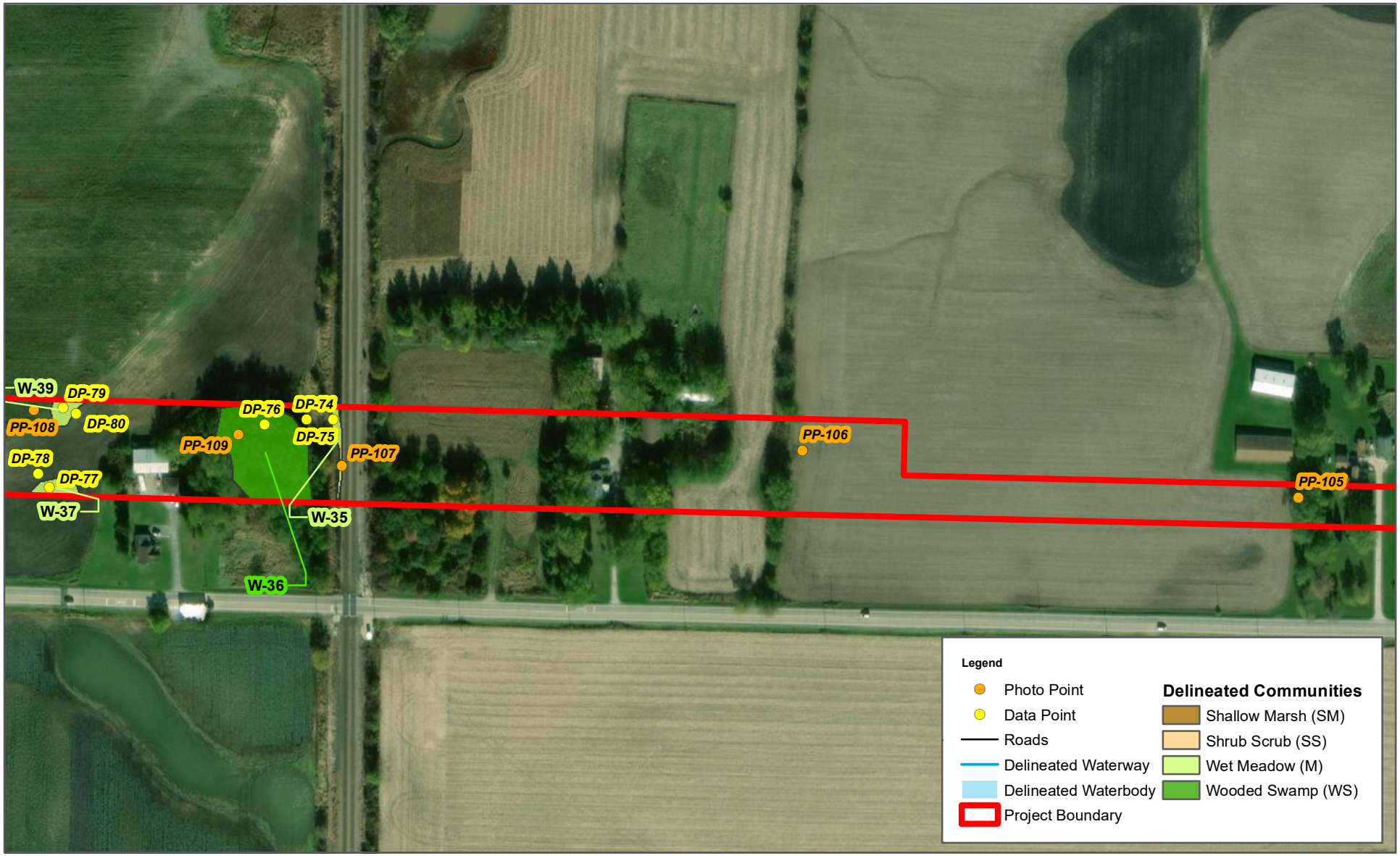

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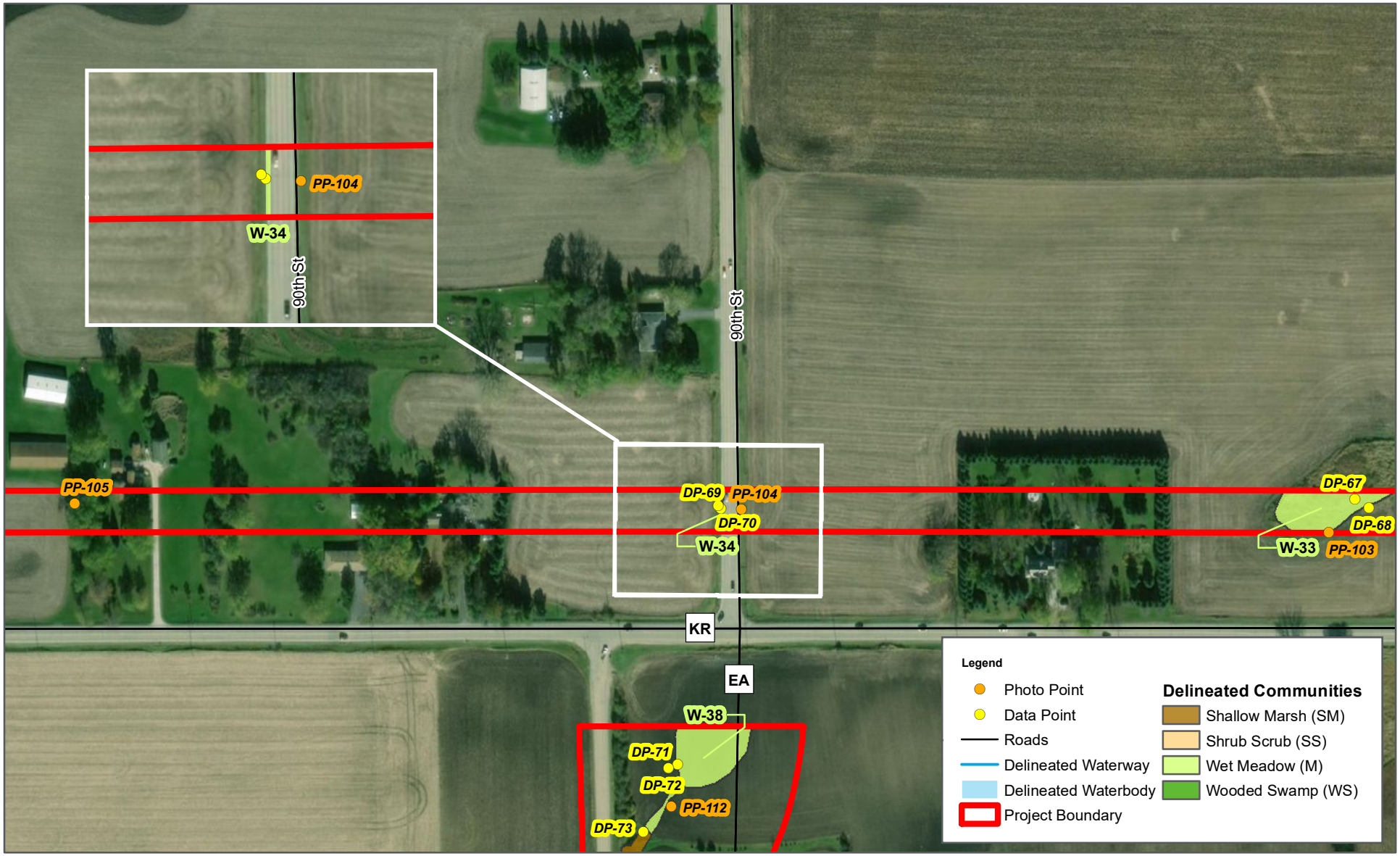

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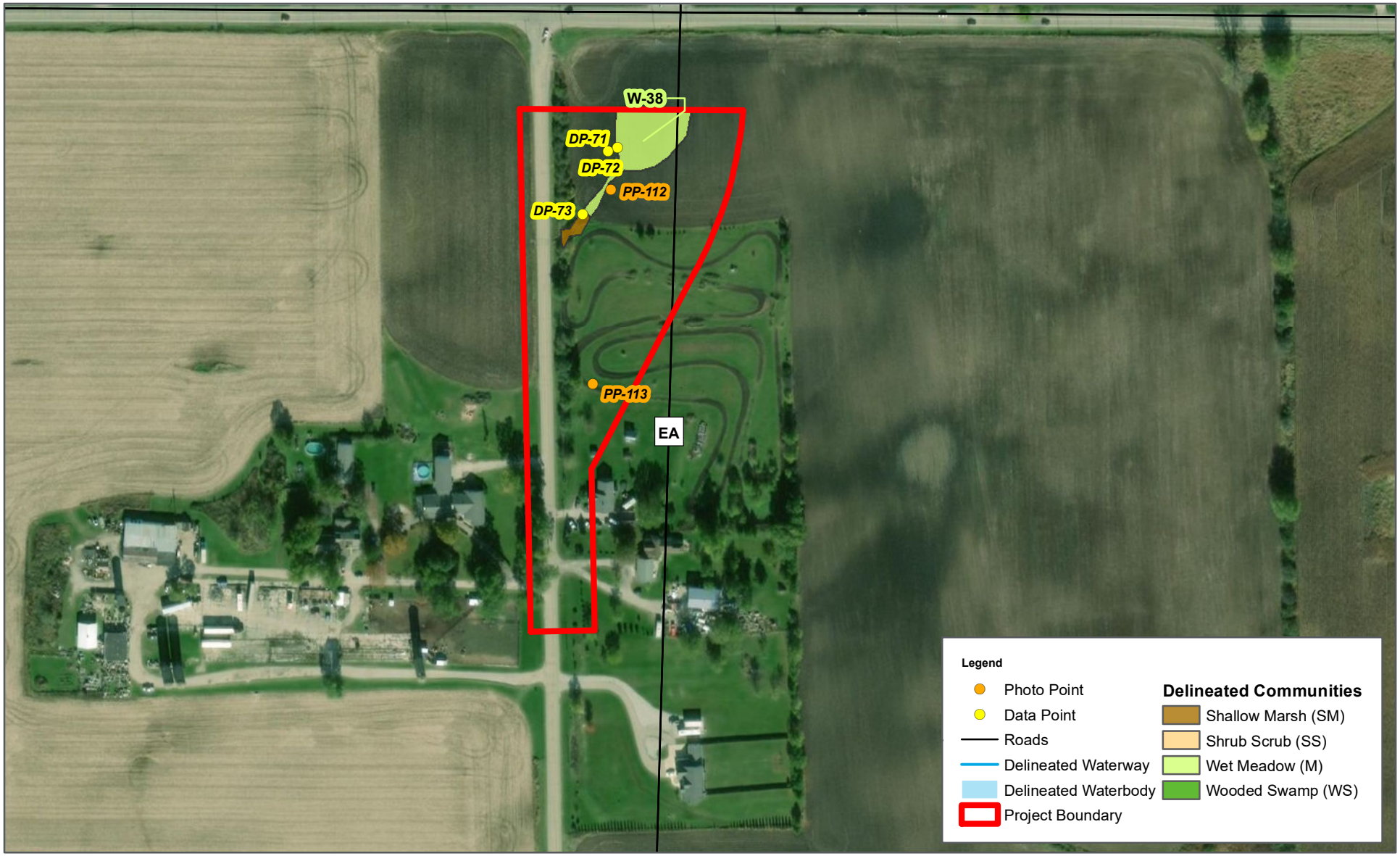

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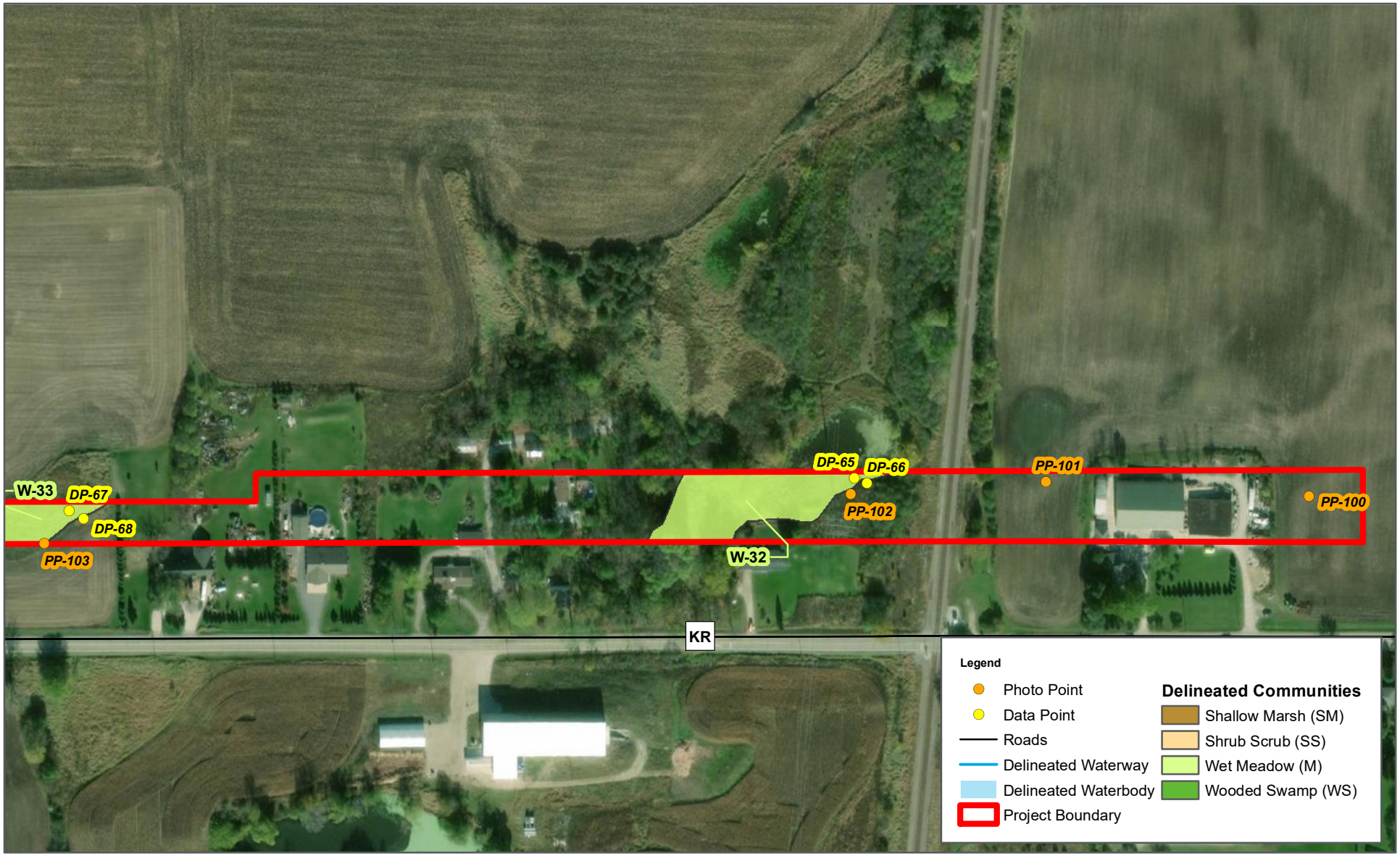

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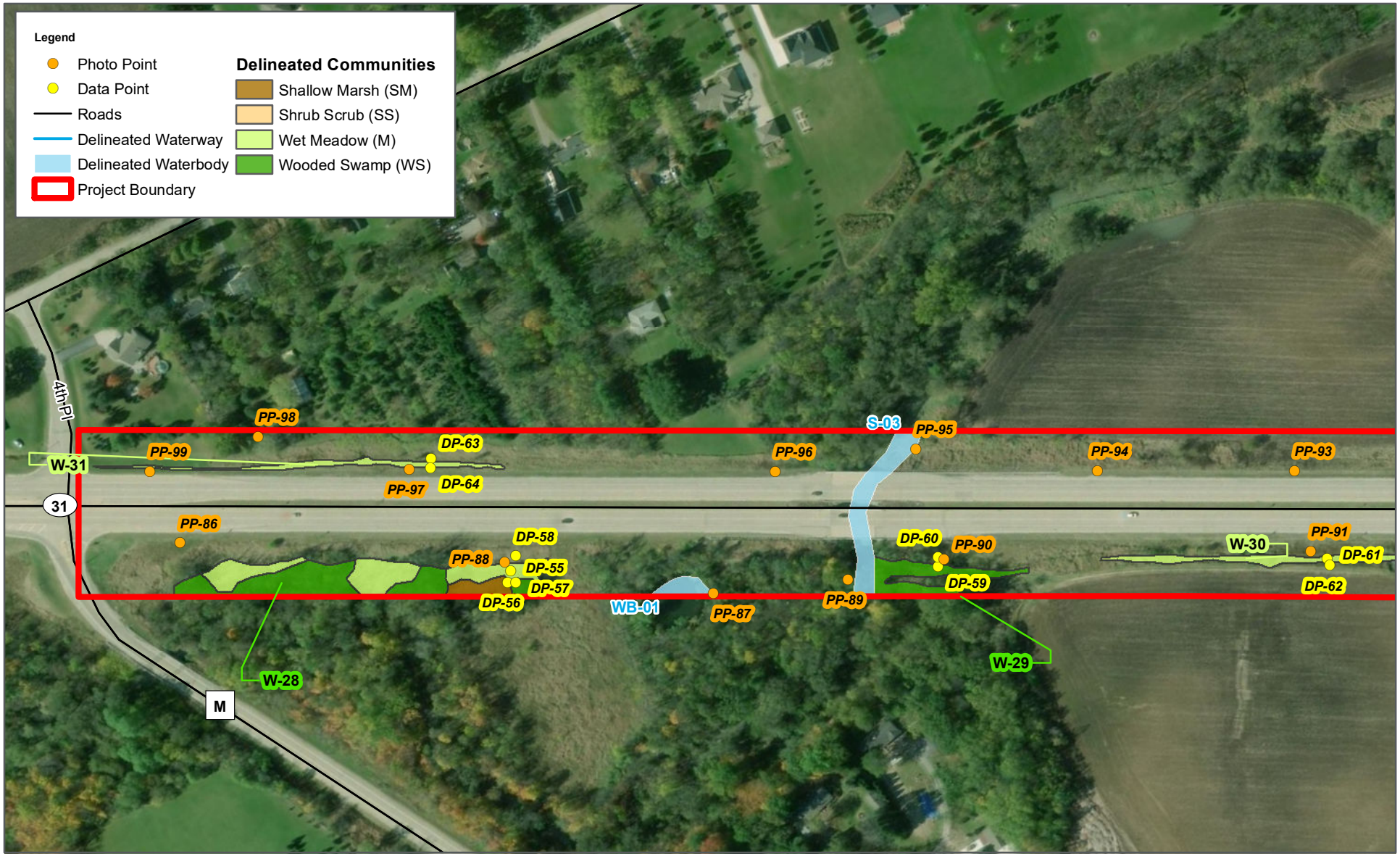

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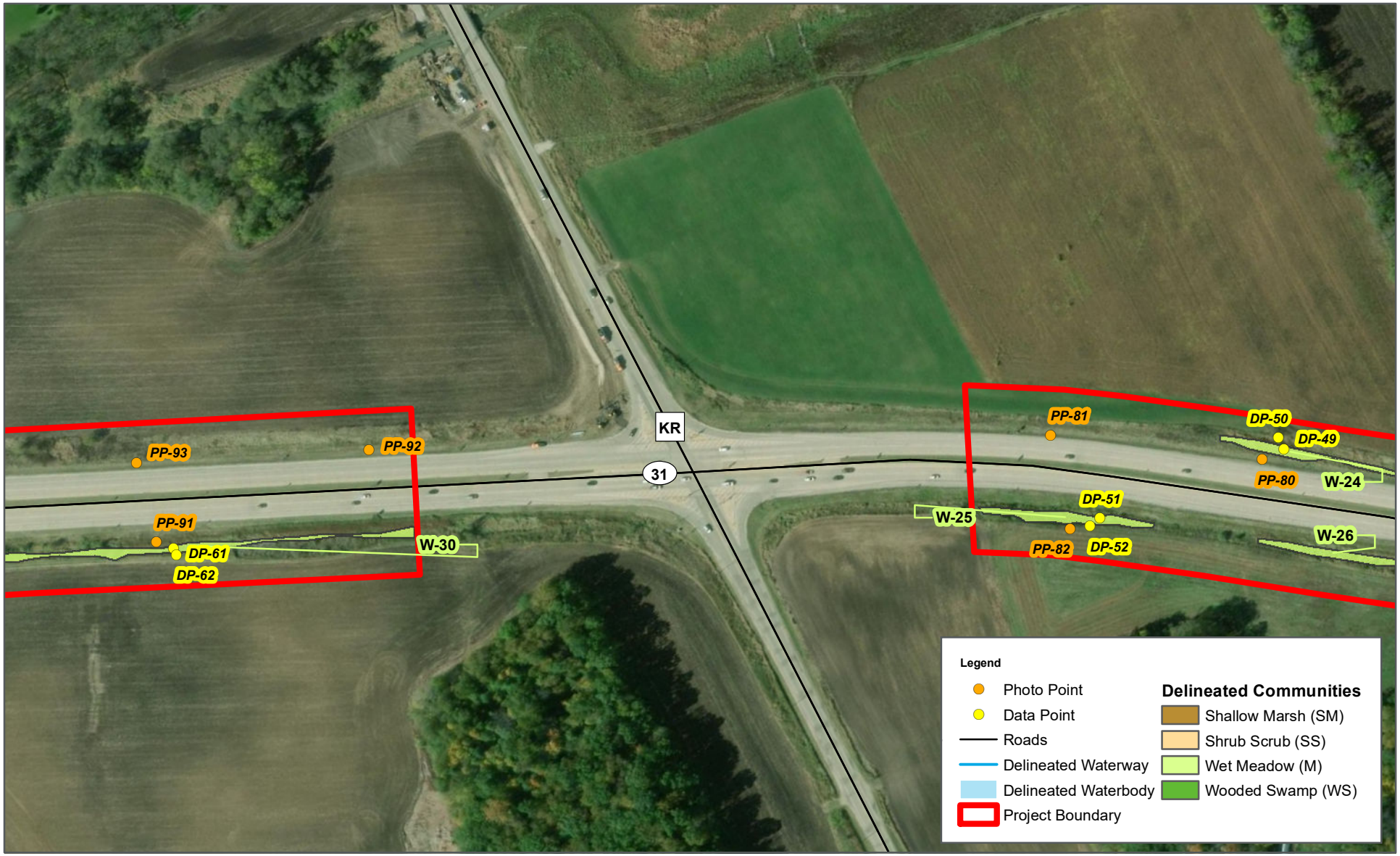

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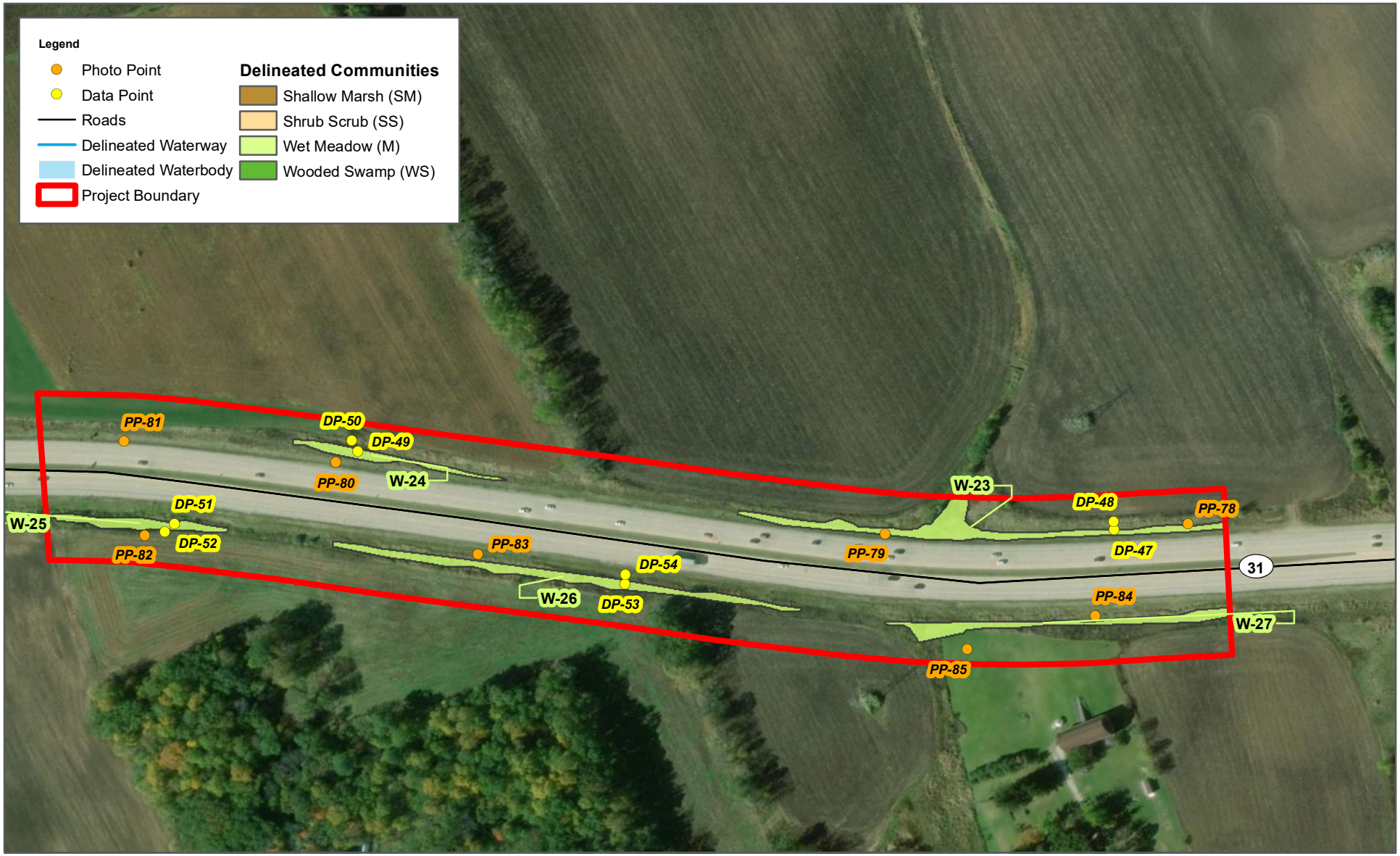

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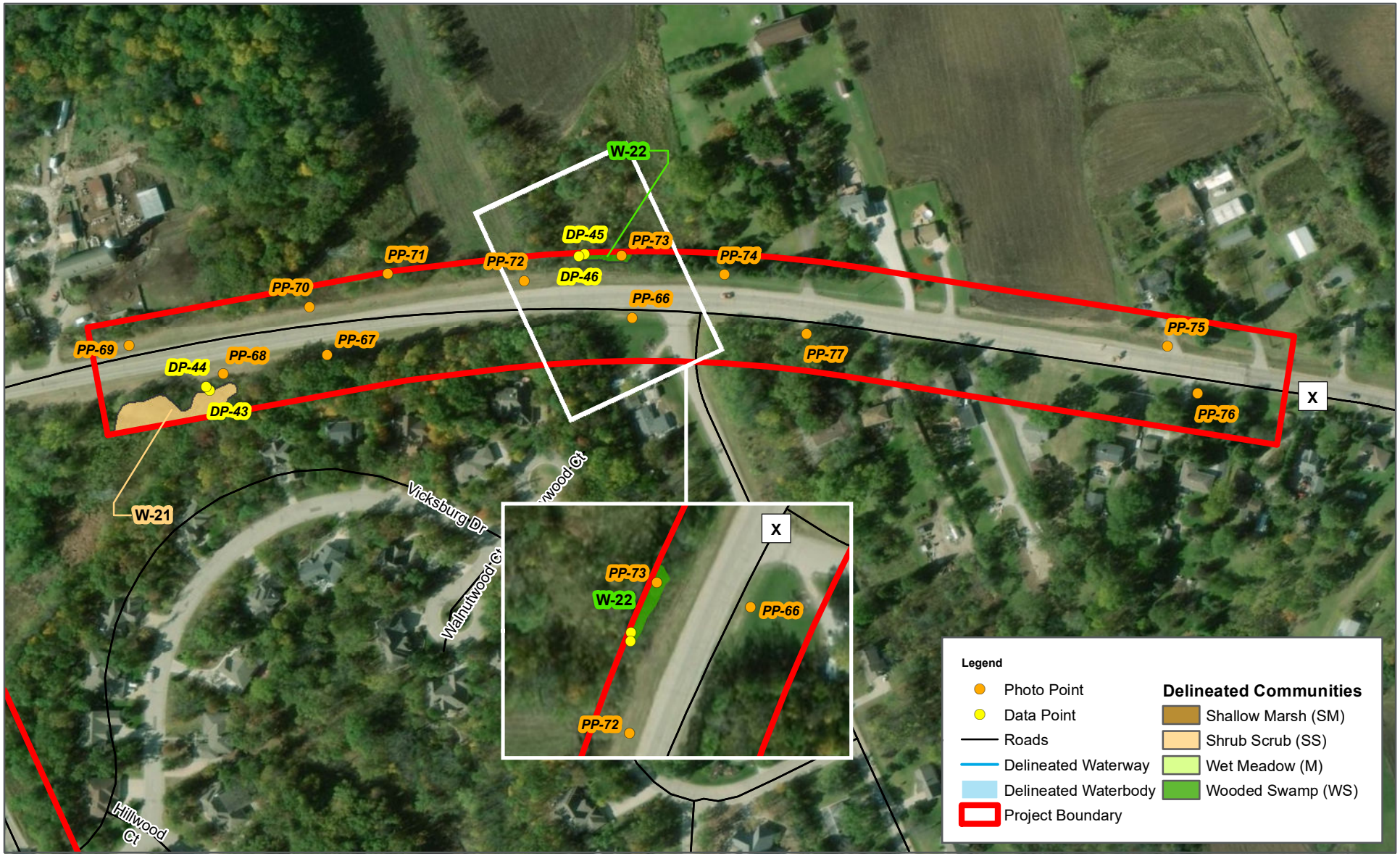

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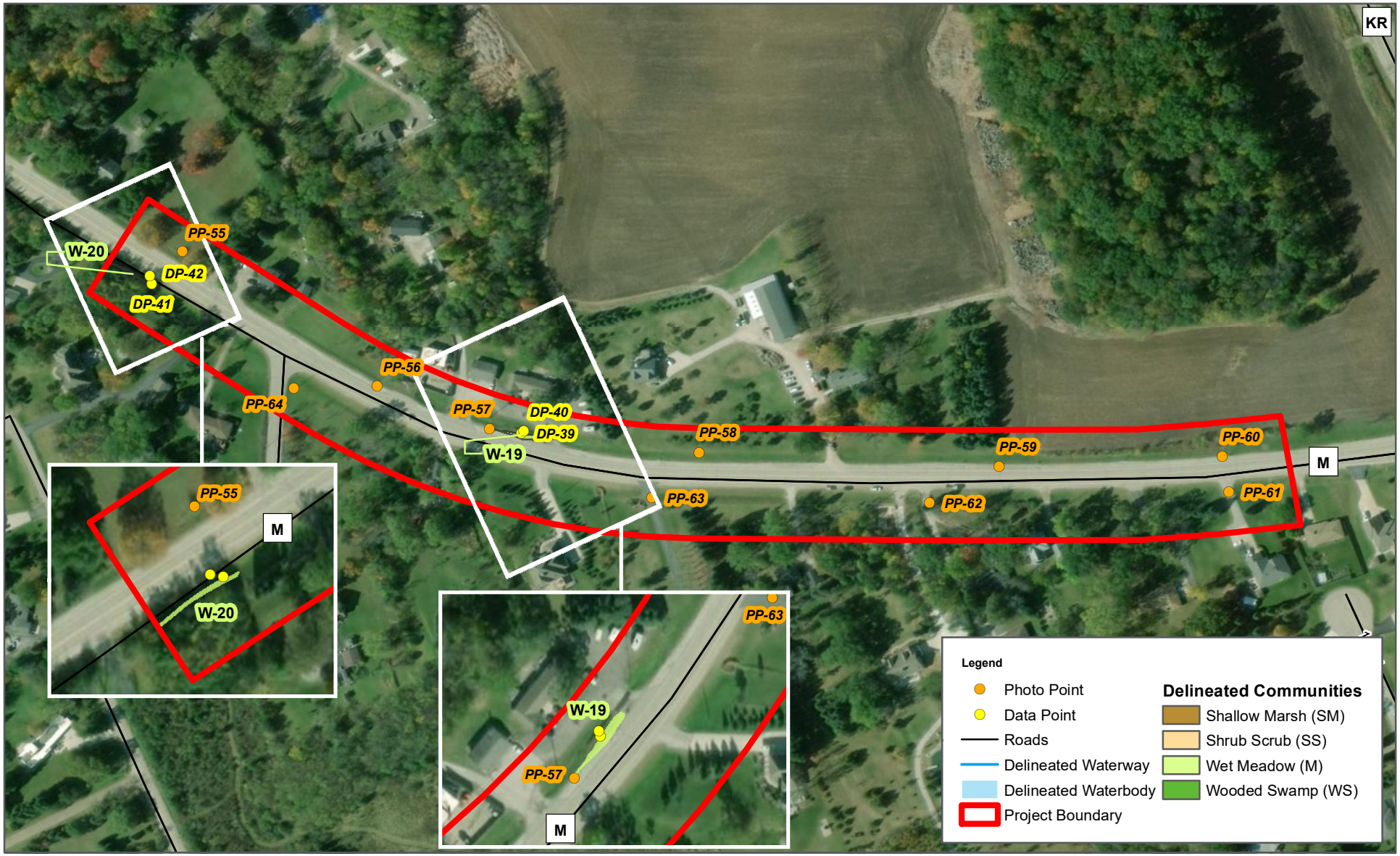

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CTH KR - CTH H to Old Green Bay Rd

APPENDIX

A

Site Photographs

Photograph DP-30 - View North

Photograph DP-30 - View South

Photograph DP-31 - View East

Photograph DP-31 - View West

Photograph DP-32 - View East

Photograph DP-32 - View West

Photograph DP-33 - View North

Photograph DP-33 - View South

Photograph DP-34 - View North

Photograph DP-34 - View South

Photograph DP-35 - View East

Photograph DP-35 - View North

Photograph DP-35 - View South

Photograph DP-36 - View East

Photograph DP-36 - View North

Photograph DP-36 - View South

Photograph DP-37 - View South

Photograph DP-37 - View West

Photograph DP-38 - View East

Photograph DP-38 - View West

Photograph DP-39 - View Northeast

Photograph DP-39 - View Southeast

Photograph DP-40 - View Northeast

Photograph DP-40 - View Southwest

Photograph DP-41 - View Northeast

Photograph DP-41 - View Southwest

Photograph DP-42 - View Northeast

Photograph DP-42 - View Southwest

Photograph DP-43 - View East

Photograph DP-43 - View West

Photograph DP-44 - View North

Photograph DP-44 - View South

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Photograph DP-72 - View North

Photograph DP-72 - View Southeast

Photograph DP-73 - View Southwest

Photograph DP-74 - View North

Photograph DP-74 - View South

Photograph DP-75 - View North

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Photograph DP-77 - View North

Photograph DP-77 - View South

Photograph DP-78 - View Northwest

Photograph DP-78 - View Southeast

Photograph DP-79 - View Northwest

Photograph DP-79 - View Southeast

Photograph DP-80 - View North

Photograph DP-80 - View South

Photograph DP-81 - View North

Photograph PP-43 - View East

Photograph PP-43 - View West

Photograph PP-44 - View East

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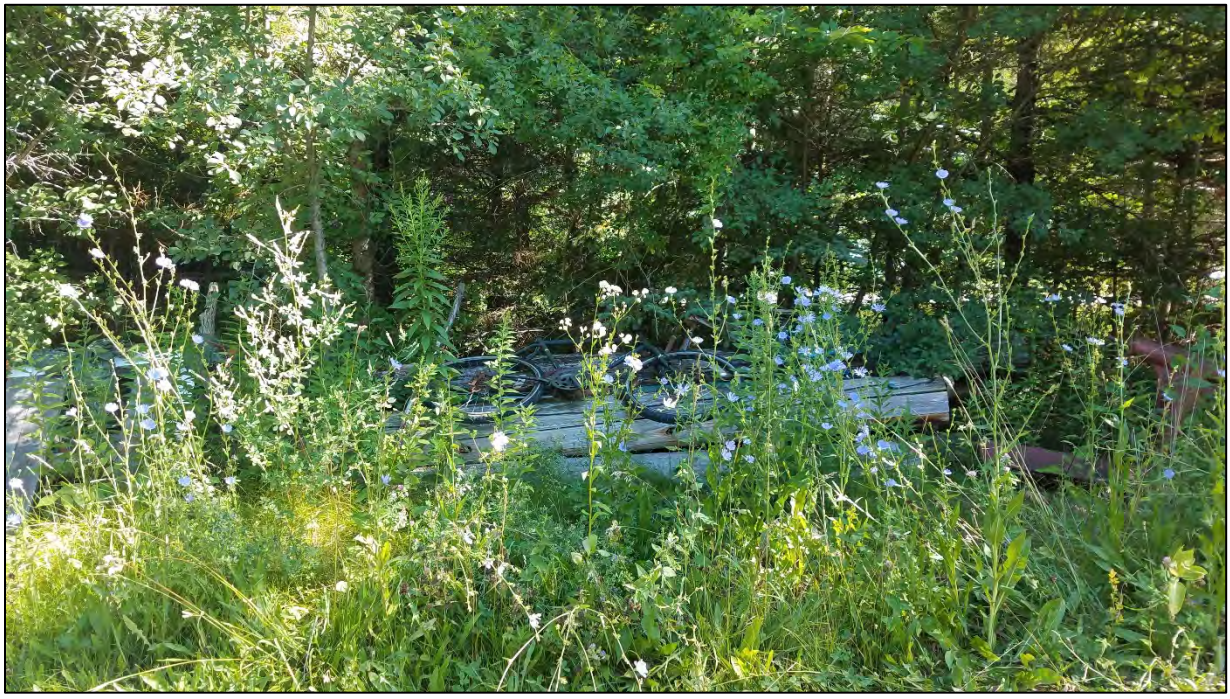
Photograph PP-45 - View West

Photograph PP-46 - View East

Photograph PP-46 - View West

Photograph PP-47 - View East



Photograph PP-47 - View North

Photograph PP-47 - View South

Photograph PP-47 - View West

Photograph PP-48 - View Northwest

Photograph PP-48 - View Southwest

Photograph PP-49 - View East

Photograph PP-49 - View West

Photograph PP-50 - View East

Photograph PP-50 - View North

Photograph PP-50 - View South

Photograph PP-50 - View West

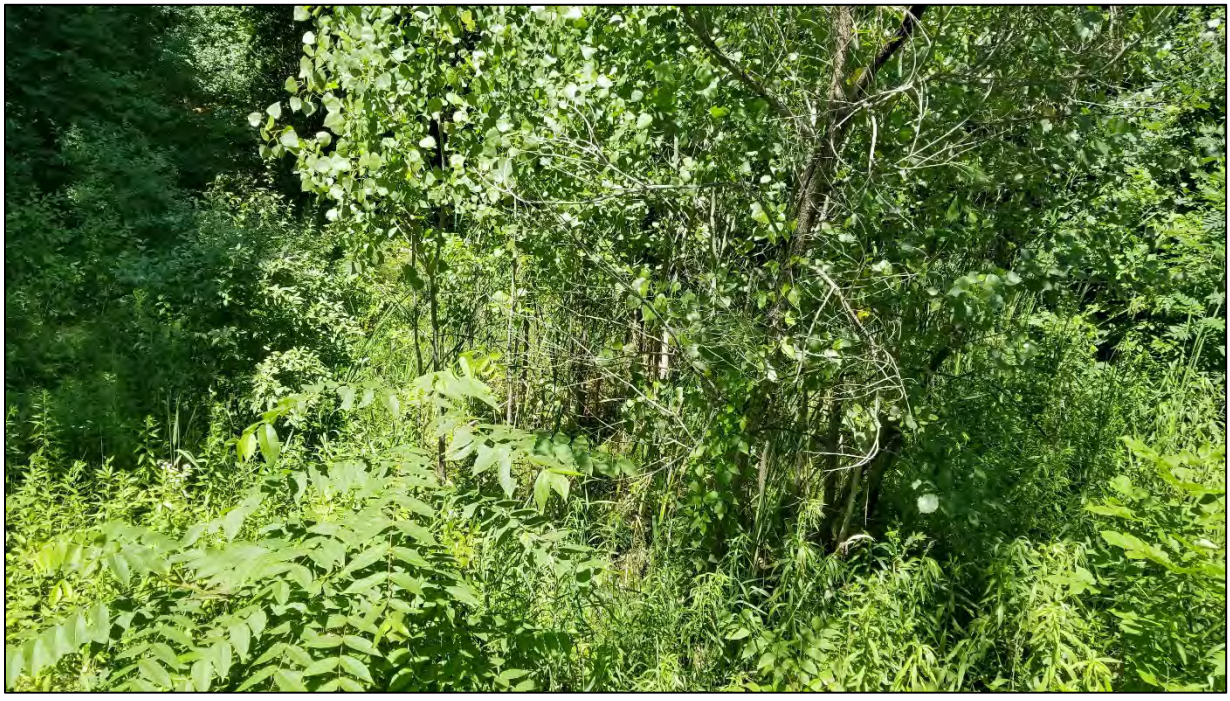
Photograph PP-51 - View East

Photograph PP-51 - View West

Photograph PP-52 - View East

Photograph PP-52 - View West

Photograph PP-53 - View Northeast



Photograph PP-54 - View Northwest

Photograph PP-55 - View Northeast

Photograph PP-55 - View Southwest

Photograph PP-56 - View Northeast

Photograph PP-56 - View Southwest

Photograph PP-57 - View Northeast

Photograph PP-58 - View Northeast

Photograph PP-58 - View Southwest

Photograph PP-59 - View North

Photograph PP-59 - View South

Photograph PP-60 - View North

Photograph PP-60 - View South

Photograph PP-61 - View North

Photograph PP-61 - View South

Photograph PP-62 - View Northeast

Photograph PP-62 - View Southwest

Photograph PP-63 - View Northeast

Photograph PP-63 - View Southwest

Photograph PP-64 - View Northeast

Photograph PP-64 - View Southwest

Photograph PP-65 - View West

Photograph PP-66 - View North

Photograph PP-66 - View South

Photograph PP-67 - View North

Photograph PP-67 - View South

Photograph PP-68 - View Southeast

Photograph PP-69 - View North

Photograph PP-69 - View South

Photograph PP-70 - View East

Photograph PP-70 - View North

Photograph PP-70 - View South

Photograph PP-70 - View West

Photograph PP-71 - View North

Photograph PP-71 - View South

Photograph PP-72 - View North

Photograph PP-72 - View South

Photograph PP-73 - View South

Photograph PP-74 - View North

Photograph PP-74 - View South

Photograph PP-75 - View North

Photograph PP-75 - View South

Photograph PP-76 - View North

Photograph PP-76 - View South

Photograph PP-77 - View North

Photograph PP-77 - View South

Photograph PP-78 - View North

Photograph PP-78 - View South

Photograph PP-79 - View North

Photograph PP-79 - View South

Photograph PP-80 - View North

Photograph PP-80 - View South

Photograph PP-81 - View North

Photograph PP-81 - View South

Photograph PP-82 - View North

Photograph PP-82 - View South

Photograph PP-83 - View North

Photograph PP-83 - View South

Photograph PP-84 - View North

Photograph PP-84 - View South

Photograph PP-85 - View Southwest

Photograph PP-86 - View North

Photograph PP-86 - View South

Photograph PP-87 - View Southwest

Photograph PP-88 - View East

Photograph PP-88 - View North

Photograph PP-88 - View South

Photograph PP-89 - View East

Photograph PP-89 - View North

Photograph PP-89 - View South

Photograph PP-89 - View West

Photograph PP-90 - View North

Photograph PP-90 - View South

Photograph PP-91 - View North

Photograph PP-91 - View South

Photograph PP-92 - View North

Photograph PP-92 - View South

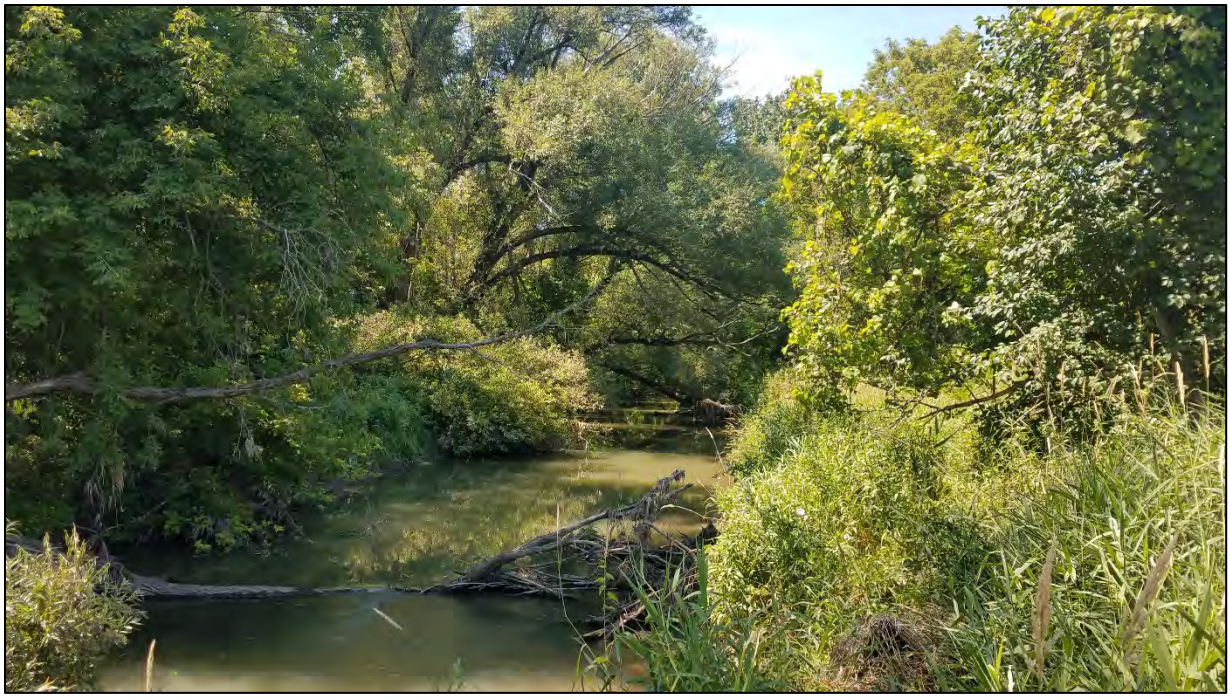
Photograph PP-93 - View North

Photograph PP-93 - View South

Photograph PP-94 - View North

Photograph PP-94 - View South

Photograph PP-95 - View East



Photograph PP-95 - View West

Photograph PP-96 - View North

Photograph PP-96 - View South

Photograph PP-97 - View North

Photograph PP-97 - View South

Photograph PP-98 - View North

Photograph PP-98 - View South

Photograph PP-99 - View North

Photograph PP-99 - View South

Photograph PP-100 - View East

Photograph PP-100 - View West

Photograph PP-101 - View East

Photograph PP-101 - View West

Photograph PP-102 - View East

Photograph PP-102 - View West

Photograph PP-103 - View East

Photograph PP-103 - View West

Photograph PP-104 - View East

Photograph PP-104 - View West

Photograph PP-105 - View East

Photograph PP-105 - View West

Photograph PP-106 - View East

Photograph PP-106 - View West

Photograph PP-107 - View North

Photograph PP-107 - View South

Photograph PP-107 - View West

Photograph PP-108 - View East

Photograph PP-108 - View West

Photograph PP-109 - View East

Photograph PP-109 - View North

Photograph PP-109 - View South

Photograph PP-109 - View West

Photograph PP-110 - View East

Photograph PP-110 - View West

Photograph PP-111 - View East

Photograph PP-111 - View West

Photograph PP-112 - View Northeast

Photograph PP-112 - View Southwest

Photograph PP-113 - View East

Photograph PP-113 - View North

Photograph PP-113 - View South

Photograph PP-113 - View West

Photograph PP-114 - View North

Photograph PP-114 - View Southwest

Photograph PP-115 - View North

Photograph PP-115 - View South

Photograph PP-116 - View South

Photograph S-02 - View North

Photograph S-02 - View South

Photograph S-02 - View West

Photograph S-03 - View East

Photograph S-03 - View North

Photograph S-03 - View West

CTH KR - CTH H to Old Green Bay Rd

APPENDIX

B

Wetland Delineation Forms

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-30

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 1

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.668165 | Long: -87.85522 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a riparian upland forest that slopes to a small perennial stream.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	10%	Yes	FACW
2.			
3.			
4.			
5.			
	10%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	15%	Yes	FAC
2. *Viburnum opulus*	15%	Yes	FAC
3.			
4.			
5.			
	30%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Hemerocallis fulva*	100%	Yes	UPL
2. *Toxicodendron rydbergii*	5%	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	105%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	15%	Yes	FACW
2.			
	15%	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	25%	x2 =	0.5
FAC species	35%	x3 =	1.05
FACU species		x4 =	
UPL species	100%	x5 =	5
Column Totals:	1.60 (A)		6.55 (B)

Prevalence Index = B/A = 4.09

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

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

SOIL

Sampling Point: DP-30

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 3/3	100			C	M	Silt Loam	
16-28"	10YR 3/2	95	7.5YR 3/3	5	C	M	Silty Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-31

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 36

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.668379 | Long: -87.854278 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a roadside ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	5%	Yes	FACW
2.			
3.			
4.			
5.			
	5% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Salix interior*	20%	Yes	FACW
2. *Carex scoparia*	15%	Yes	FACW
3. *Typha X glauca*	10%	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	45% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
	That Are OBL, FACW, or FAC:		A/B
OBL species	10%	x1 =	0.1
FACW species	40%	x2 =	0.8
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.50 (A)		0.9 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Previous years' dead vegetation covers the ground.

SOIL

Sampling Point: DP-31

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 3/2	95	7.5YR 4/6	5	C	M	Clay	
6-20"	2.5YR 7/1	60	10YR 6/6	40	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox was observed throughout the profile.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X 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)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
The feature appears to hold surface water during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-32

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 36

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.668389 | Long: -87.854304 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on the edge of a woodlot between subdivisions.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	30%	Yes	FACW
2. *Juglans nigra*	30%	Yes	FACU
3. *Quercus alba*	10%	No	FACU
4. *Tilia Americana*	10%	No	FACU
5.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	20%	Yes	FAC
2.			
3.			
4.			
5.			
	20%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Gaultheria procumbens*	20%	Yes	FACU
2. *Poa pratensis*	15%	Yes	FAC
3. *Rosa multiflora*	10%	No	FACU
4. *Leucanthemum vulgare*	5%	No	UPL
5. *Fragaria virginiana*	5%	No	FACU
6. *Daucus carota*	2%	No	UPL
7. *Rhamnus cathartica*	2%	No	FAC
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	59%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
	That Are OBL, FACW, or FAC:	A/B
OBL species		x1 =
FACW species	30%	x2 = 0.6
FAC species	37%	x3 = 1.11
FACU species	85%	x4 = 3.4
UPL species	7%	x5 = 0.35
Column Totals:	1.59 (A)	5.46 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
The canopy is dense.

SOIL

Sampling Point: DP-32

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 5/4	100			C	M	Silty Clay Loam	
16-24"	10YR 5/4	98	10YR 6/8	2	C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-33

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 36

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.668545 | Long: -87.855373 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdC - Ozaukee silt loam, 6 to 12 percent slopes | NWI classification: T3/W0H

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wooded swamp following a small, perennial stream through a woodlot surrounded by subdivisions.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	30%	Yes	FACW
2. *Acer saccharinum*	30%	Yes	FACW
3.			
4.			
5.			
	60%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	5%	Yes	FAC
2. *Fraxinus pennsylvanica*	5%	Yes	FACW
3. *Lonicera tatarica*	2%	No	FACU
4.			
5.			
	12%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Cicuta maculata*	60%	Yes	OBL
2. *Impatiens capensis*	10%	No	FACW
3. *Toxicodendron rydbergii*	2%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	72%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
			A/B
OBL species	60%	x1 =	0.6
FACW species	75%	x2 =	1.5
FAC species	7%	x3 =	0.21
FACU species	2%	x4 =	0.08
UPL species		x5 =	
Column Totals:	1.44 (A)		2.39 (B)

Prevalence Index = B/A = 1.66

Hydrophytic Vegetation Indicators:

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The herbaceous vegetation is tall.

SOIL

Sampling Point: DP-33

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 2/1	100			C	M	Loam	
6-24"	10YR 2/1	100			C	M	Clay Loam	
24-30"	10YR 4/1	90	7.5YR 4/6	10	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:
A depleted layer with redox was observed under a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
This area was located in a mapped WWI and Hydric Soil Unit.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-34

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 36

Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): convex

Slope (%): 3% | Lat: 42.668524 | Long: -87.855314 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdC - Ozaukee silt loam, 6 to 12 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in an upland woodlot between subdivisions.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	50%	Yes	FACU
2. *Acer saccharum*	30%	Yes	FACU
3. *Ulmus americana*	5%	No	FACW
4.			
5.			
	85%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	30%	Yes	FAC
2. *Lonicera tatarica*	15%	Yes	FACU
3.			
4.			
5.			
	45%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Rhamnus cathartica*	15%	Yes	FAC
2. *Lonicera tatarica*	10%	Yes	FACU
3. *Toxicodendron rydbergii*	2%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	27%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
	That Are OBL, FACW, or FAC:	A/B
OBL species		x1 =
FACW species	5%	x2 = 0.1
FAC species	47%	x3 = 1.41
FACU species	105%	x4 = 4.2
UPL species		x5 =
Column Totals:	1.57 (A)	5.71 (B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The herbaceous layer is sparse.

SOIL

Sampling Point: DP-34

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 3/2	100			C	M	Silt Loam	
18-24"	10YR 3/3	70	10YR 4/6	30	C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-35

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 2% | Lat: 42.668596 | Long: -87.858666 | Datum: NAD83 UTM16N

Soil Map Unit Name: BIA - Blount silt loam, 1 to 3 percent slopes | NWI classification: T3K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wooded swamp in a woodlot between subdivisions.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus bicolor*	30%	Yes	FACW
2. *Fraxinus pennsylvanica*	20%	Yes	FACW
3. *Tilia americana*	20%	Yes	FACU
4. *Populus deltoides*	10%	No	FAC
5.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	15%	Yes	FAC
2. *Fraxinus pennsylvanica*	5%	Yes	FACW
3. *Viburnum opulus*	2%	No	FAC
4.			
5.			
	22%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Arisaema triphyllum*	15%	Yes	FACW
2. *Rhamnus cathartica*	5%	Yes	FAC
3. *Ribes americanum*	5%	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	25%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	75%	x2 =	1.5
FAC species	32%	x3 =	0.96
FACU species	20%	x4 =	0.8
UPL species		x5 =	
Column Totals:	1.27 (A)		3.26 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
X 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The herbaceous layer is sparse.

SOIL

Sampling Point: DP-35

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 2/1	100			C	M	Silt Loam	
3-6"	10YR 2/1	95	7.5YR 4/6	5	C	M	Silt Loam	
6-18"	7.5YR 6/1	65	7.5YR 4/6	35	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox was observed throughout most of the profile.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
Lower portions of the feature held surface water at time of survey.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-36

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Footslope | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.668597 | Long: -87.858726 | Datum: NAD83 UTM16N

Soil Map Unit Name: BIA - Blount silt loam, 1 to 3 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in an upland woodlot between subdivisions.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	40%	Yes	FACU
2. *Fraxinus pennsylvanica*	10%	No	FACW
3. *Tilia americana*	10%	No	FACU
4.			
5.			
	60%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	20%	Yes	FAC
2. *Lonicera tatarica*	10%	Yes	FACU
3. *Fraxinus pennsylvanica*	2%	No	FACW
4.			
5.			
	32%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Rhamnus cathartica*	5%	Yes	FAC
2. *Anemone quinquefolia*	2%	Yes	FAC
3. *Trillium grandiflorum*	2%	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	9%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	12%	x2 =	0.24
FAC species	27%	x3 =	0.81
FACU species	60%	x4 =	2.4
UPL species	2%	x5 =	0.1
Column Totals:	1.01 (A)		3.55 (B)

Prevalence Index = B/A = 3.51

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The herbaceous layer is sparse.

SOIL

Sampling Point: DP-36

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14"	10YR 5/3	100			C	M	Silt Loam	
14-20"	10YR 5/3	95	10YR 4/4	5	C	M	Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-37

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): convex

Slope (%): 1% | Lat: 42.668519 | Long: -87.862026 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch overgrown with sandbar willow.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	95%	Yes	FACW
2. *Acer Negundo*	5%	No	FAC
3.			
4.			
5.			
	100% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Salix interior*	5%	Yes	FACW
2. *Impatiens capensis*	2%	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	7% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	102%	x2 =	2.04
FAC species	5%	x3 =	0.15
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.07 (A)		2.19 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Willows have shaded out the herbaceous layer.

SOIL

Sampling Point: DP-37

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5"	10YR 3/1	100			C	M	Loam	Gravel, unable to sample past 5"

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: gravel

Depth (inches): 5

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

Remarks:

Unable to sample soils past 5". Soils are assumed to be hydric based on landscape position and prevalence of hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:

The point is in a hydric soil unit.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-38

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Footslope | Local relief (concave, convex, none): convex

Slope (%): 1% | Lat: 42.668533 | Long: -87.861999 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is between a roadside ditch and a woodlot.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	5%	Yes	FACW
2.			
3.			
4.			
5.			
	5% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	40%	Yes	FAC
2. *Apocynum cannabinum*	15%	Yes	FAC
3. *Hypericum perforatum*	10%	No	FACU
4. *Solidago canadensis*	5%	No	FACU
5. *Taraxacum officinale*	5%	No	FACU
6. *Daucus carota*	2%	No	UPL
7. *Cirsium arvense*	2%	No	FACU
8. *Asclepias verticillata*	2%	No	FACU
9. *Erigeron strigosus*	1%	No	FACU
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	82% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	5%	x2 =	0.1
FAC species	55%	x3 =	1.65
FACU species	25%	x4 =	1
UPL species	2%	x5 =	0.1
Column Totals:	0.87 (A)		2.85 (B)

Prevalence Index = B/A = 3.28

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Kentucky bluegrass dominates throughout.

SOIL

Sampling Point: DP-38

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5"	10YR 3/1	100			C	M	Loam	Gravel, unable to sample past 5"

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: gravel

Depth (inches): 5

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-39

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0% | Lat: 42.663827 | Long: -87.866978 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch of cattails.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	80%	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	80%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	80%	x1 =	0.8
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.80 (A)		0.8 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation is similar throughout.

SOIL

Sampling Point: DP-39

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 3/1	70	10YR 5/1	25	D	M	Clay Loam	
			7.5YR 4/6	5	C	M	Clay Loam	
3-12"	10YR 4/1	90	10YR 4/6	10	C	M	Clay Loam	
12-24"	10YR 4/2	75	10YR 4/6	25	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox was observed through the profile.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
The feature appears to hold surface water during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-40

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 3% | Lat: 42.663827 | Long: -87.866978 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in mowed lawn.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Schedonorus arundinaceus*	65%	Yes	FACU
2. *Cirsium arvense*	10%	No	FACU
3. *Poa pratensis*	10%	No	FAC
4. *Dipsacus laciniatus*	5%	No	UPL
5. *Taraxacum officinale*	5%	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	95%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	10%	x3 =	0.3
FACU species	80%	x4 =	3.2
UPL species	5%	x5 =	0.25
Column Totals:	0.95 (A)		3.75 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The lawn transitions to Kentucky bluegrass upslope.

SOIL

Sampling Point: DP-40

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	10YR 3/2	100			C	M	Loam	
8-20"	10YR 4/3	100			C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-41

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 2% | Lat: 42.662514 | Long: -87.86899 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. WETS analysis determined that the antecedent precipitation conditions were normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Euthamia graminifolia*	65%	Yes	FACW
2. *Phalaris arundinacea*	10%	No	FACW
3. *Rumex crispus*	1%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	76%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	75%	x2 =	1.5
FAC species	1%	x3 =	0.03
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.76 (A)		1.53 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Reed canary grass extends outside the wetland.

SOIL

Sampling Point: DP-41

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12"	10Yr 2/2	80	2.5YR 6/1	20	D	M	Clay Loam	Gravel inclusions
12-20"	10YR 5/2	95	7.5YR 5/8	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Shallow depletions were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
The feature appears to contain shallow water table during a portion of the year.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-42

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.662525 | Long: -87.869039 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is along a road shoulder.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	60%	Yes	FAC
2. *Cirsium arvense*	15%	No	FACU
3. *Taraxacum officinale*	5%	No	FACU
4. *Lotus corniculatus*	5%	No	FACU
5. *Sonchus arvensis*	5%	No	FACU
6. *Daucus carota*	2%	No	UPL
7. *Plantago major*	2%	No	FAC
8. *Convolvulus arvensis*	2%	No	UPL
9. *Leucanthemum vulgare*	2%	No	UPL
10. *Erigeron strigosus*	1%	No	FACU
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	99%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	62%	x3 =	1.86
FACU species	31%	x4 =	1.24
UPL species	6%	x5 =	0.3
Column Totals:	0.99 (A)		3.4 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar along the road.

SOIL

Sampling Point: DP-42

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9"	10YR 3/3	100					Silt Loam	Gravel inclusions at 9" prevented further sampling.

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 9

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

Remarks:

Unable to observe soils past 9". Soils assumed to be non-hydric due to landscape position and non-hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:

No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-43

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.670288 | Long: -87.863021 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a shrub-carr extending to the roadway.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	50%	Yes	FACW
2. *Cornus racemosa*	20%	Yes	FAC
3. *Ribes hirtellum*	10%	No	FACW
4.			
5.			
	80%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Solidago gigantea*	40%	Yes	FACW
2. *Phalaris arundinacea*	10%	No	FACW
3. *Apocynum cannabinum*	1%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	51%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	15%	Yes	FACW
2.			
	15%	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	125%	x2 =	2.5
FAC species	21%	x3 =	0.63
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.46 (A)		3.13 (B)

Prevalence Index = B/A = 2.14

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
X 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The shrub layer is dense.

SOIL

Sampling Point: DP-43

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	10YR 3/1	100					Silty Clay Loam	
8-24"	10YR 5/2	90	10YR 7/6	10	C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
A depleted layer with redox was observed under a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
Lower portions of the feature may contain standing water.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-44

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): convex

Slope (%): 4% | Lat: 42.670273 | Long: -87.863063 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. Data point was taken in a recently mowed road right-of-way.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	65%	Yes	FAC
2. *Schedonorus arundinaceus*	20%	Yes	FACU
3. *Apocynum cannabinum*	5%	No	FAC
4. *Securigera varia*	2%	No	UPL
5. *Taraxacum officinale*	2%	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	94%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	15%	Yes	FACW
2.			
	15%	= 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: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
			A/B
OBL species		x1 =	
FACW species	15%	x2 =	0.3
FAC species	70%	x3 =	2.1
FACU species	22%	x4 =	0.88
UPL species	2%	x5 =	0.1
Column Totals:	1.09 (A)		3.38 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation was still able to be identified despite mowing.

SOIL

Sampling Point: DP-44

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 3/3	100					Silt Loam	
16-24"	10YR 4/2	95	10YR 6/4	5	C	M	Silty Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-45

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.672279 | Long: -87.862727 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wooded swamp between a subdivision and agricultural land.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	20%	Yes	FAC
2. *Salix nigra*	20%	Yes	OBL
3.			
4.			
5.			
	40%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Cornus racemosa*	10%	Yes	FAC
2. *Salix interior*	5%	Yes	FACW
3.			
4.			
5.			
	15%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	40%	Yes	OBL
2. *Phalaris arundinacea*	25%	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	65%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	15%	Yes	FACW
2.			
	15%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
			A/B
OBL species	60%	x1 =	0.6
FACW species	45%	x2 =	0.9
FAC species	30%	x3 =	0.9
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.35 (A)		2.4 (B)

Prevalence Index = B/A = 1.78

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
X 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
An interrupted canopy allows for emergent vegetative growth.

SOIL

Sampling Point: DP-45

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5"	10YR 3/2	100					Sandy Loam	
5-11"	10YR 6/2	90	10YR 5/6	10	C	M	Clay Loam	
11-24"	10YR 3/2	95	10YR 5/6	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X 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)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:

The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/17/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-46

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.672254 | Long: -87.862744 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is along a road.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra*	15%	Yes	FACU
2.			
3.			
4.			
5.			
	15%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	10%	Yes	FAC
2.			
3.			
4.			
5.			
	10%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	25%	Yes	FAC
2. *Phleum pratense*	10%	Yes	FACU
3. *Cirsium arvense*	10%	Yes	FACU
4. *Euthamia graminifolia*	5%	No	FACW
5. *Daucus carota*	5%	No	UPL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	55%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	10%	Yes	FACW
2.			
	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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	15%	x2 =	0.3
FAC species	35%	x3 =	1.05
FACU species	35%	x4 =	1.4
UPL species	5%	x5 =	0.25
Column Totals:	0.90 (A)		3 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-46

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 5/4	100					Loam	
6-14"	10YR 6/4	100					Clay Loam	
14-20"	10YR 6/4	92	2.5YR 5/1	6	D	M	Clay	
			7.5YR 5/6	2	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-47

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.674282 | Long: -87.86458 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	75%	Yes	FACW
2. *Rumex crispus*	10%	No	FAC
3. *Calamagrostis canadensis*	5%	No	OBL
4. *Poa pratensis*	2%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	92%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	5%	x1 =	0.05
FACW species	75%	x2 =	1.5
FAC species	12%	x3 =	0.36
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.92 (A)		1.91 (B)

Prevalence Index = B/A = 2.08

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-47

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 3/1	93	5YR 4/6	5	C	M	Clay Loam	
			10YR 5/8	2	C	M	Clay Loam	
20-26"	10YR 6/2	90	10YR 5/8	10	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer and a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
The feature may convey water at times throughout the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-48

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Footslope | Local relief (concave, convex, none): convex

Slope (%): 10% | Lat: 42.674276 | Long: -87.864646 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on a linear berm along a highway.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Cirsium arvense*	25%	Yes	FACU
2. *Daucus carota*	20%	Yes	UPL
3. *Sonchus arvensis*	15%	Yes	FACU
4. *Melilotus officinalis*	15%	Yes	FACU
5. *Arctium minus*	10%	No	FACU
6. *Poa pratensis*	5%	No	FAC
7. *Phalaris arundinacea*	5%	No	FACW
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	95%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	5%	x2 =	0.1
FAC species	5%	x3 =	0.15
FACU species	65%	x4 =	2.6
UPL species	20%	x5 =	1
Column Totals:	0.95 (A)		3.85 (B)

Prevalence Index = B/A = 4.05

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-48

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 4/3	100					Loam	
6-24"	10YR 3/4	100					Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-49

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 2% | Lat: 42.671203 | Long: -87.867524 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch of cattails.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	95%	Yes	OBL
2. *Phalaris arundinacea*	4%	No	FACW
3. *Poa pratensis*	1%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	95%	x1 =	0.95
FACW species	4%	x2 =	0.08
FAC species	1%	x3 =	0.03
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.00 (A)		1.06 (B)

Prevalence Index = B/A = 1.06

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-49

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12"	10YR 2/1	100					Silt Loam	
12-20"	10YR 6/1	95	10YR 6/6	5	C	M	Silt Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes X No ___	Depth (inches):	10"
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	8"

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

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

Remarks:
The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-50

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 3% | Lat: 42.671211 | Long: -87.86761 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on the backside of a road shoulder.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Cirsium arvense*	20%	Yes	FACU
2. *Vicia americana*	20%	Yes	FACU
3. *Ambrosia trifida*	15%	Yes	FAC
4. *Poa pratensis*	15%	Yes	FAC
5. *Phalaris arundinacea*	10%	No	FACW
6. *Arctium minus*	10%	No	FACU
7. *Sonchus arvensis*	5%	No	FACU
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	95%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	10%	x2 =	0.2
FAC species	30%	x3 =	0.9
FACU species	55%	x4 =	2.2
UPL species		x5 =	
Column Totals:	0.95 (A)		3.3 (B)

Prevalence Index = B/A = 3.47

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is mowed in areas nearby.

SOIL

Sampling Point: DP-50

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13"	10YR 4/3	100					Loam	
13-24"	10YR 5/3	93	10YR 6/1	5	C	M	Clay Loam	
			10YR 7/8	2	C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	10"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	8"

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-51

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 2% | Lat: 42.670229 | Long: -87.867715 | Datum: NAD83 UTM16N

Soil Map Unit Name: SzB - Symerton loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch of cattails.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	10%	Yes	FACW
2.			
3.			
4.			
5.			
	10% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	50%	Yes	FACW
2. *Typha X glauca*	40%	Yes	OBL
3. *Impatiens capensis*	5%	No	FACW
4. *Cicuta maculata*	2%	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	97% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
	That Are OBL, FACW, or FAC:		A/B
OBL species	42%	x1 =	0.42
FACW species	65%	x2 =	1.3
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.07 (A)		1.72 (B)

Prevalence Index = B/A = 1.61

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-51

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: Riprap

Depth (inches): 0

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

Remarks:

Soils were unable to be observed due to placement of riprap. Soils are assumed to be hydric based on landscape position, obvious wetland hydrology, and hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

Remarks:

Surface was present at time of survey.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-52

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 8% | Lat: 42.670172 | Long: -87.867689 | Datum: NAD83 UTM16N

Soil Map Unit Name: SzB - Symerton loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on the backside of a road shoulder.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5%	Yes	FAC
2.			
3.			
4.			
5.			
	5% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Solidago canadensis*	25%	Yes	FACU
2. *Asclepias syriaca*	20%	Yes	FACU
3. *Cirsium arvense*	15%	Yes	FACU
4. *Poa pratensis*	10%	No	FAC
5. *Equisetum hyemale*	10%	No	FACW
6. *Ambrosia trifida*	10%	No	FAC
7. *Daucus carota*	5%	No	UPL
8. *Ambrosia artemisiifolia*	2%	No	FACU
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	97% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	10%	x2 =	0.2
FAC species	25%	x3 =	0.75
FACU species	62%	x4 =	2.48
UPL species	5%	x5 =	0.25
Column Totals:	1.02 (A)		3.68 (B)

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-52

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/2	100					Silt Loam	
16-24"	10YR 6/3	98	10YR 7/2	2	D	M	Silt Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-53

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.672047 | Long: -87.865872 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch of cattails.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	60%	Yes	FACW
2. *Typha X glauca*	40%	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	40%	x1 =	0.4
FACW species	60%	x2 =	1.2
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.00 (A)		1.6 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-53

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 2/1	100					Loam	
3-15"	10YR 2/1	80	10YR 5/8	15	C	M	Clay Loam	
			10YR 6/1	5	D	M	Clay Loam	
15-24"	10YR 6/1	80	7.5YR 5/8	20	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:

The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-54

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.672056 | Long: -87.865935 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on a road shoulder.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Fraxinus pennsylvanica*	2%	No	FACW
2.			
3.			
4.			
5.			
	2%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	50%	Yes	FAC
2. *Cirsium arvense*	20%	Yes	FACU
3. *Asclepias syriaca*	15%	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	85%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
	That Are OBL, FACW, or FAC:	A/B
OBL species		x1 =
FACW species	2%	x2 = 0.04
FAC species	50%	x3 = 1.5
FACU species	35%	x4 = 1.4
UPL species		x5 =
Column Totals:	0.87 (A)	2.94 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-54

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 3/3	100					Loam	
6-20"	10YR 4/4	100					Silty Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-55

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.662471 | Long: -87.872764 | Datum: NAD83 UTM16N

Soil Map Unit Name: Am - Alluvial land | NWI classification: T3K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wet, emergent basin between to converging roadways.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	100%	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	100%	x2 =	2
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.00 (A)		2 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Lower portions of the wetland transition to cattails.

SOIL

Sampling Point: DP-55

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/1	100					Silt Loam	
16-24"	10YR 4/1	60	10YR 3/2	20	C	M	Silty Clay Loam	
			7.5YR 5/8	20	C	M	Silty Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Lower portions of the feature appear to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-56

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0% | Lat: 42.662437 | Long: -87.872712 | Datum: NAD83 UTM16N

Soil Map Unit Name: Am - Alluvial land | NWI classification: T3K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wet basin between two converging roadways.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	60%	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	60%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	60%	x1 =	0.6
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.60 (A)		0.6 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Other portions of the feature transition to reed canary grass.

SOIL

Warning - Potential A12 Soils, Complete the Soil Profile

Sampling Point: DP-56

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 2/1	100			C	M	Mucky Peat	
3-36"	10YR 2/1	100			C	M	Mucky Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Unable to retrieve B horizon. B horizon assumed to be depleted, meeting A12, due to obvious hydrology and landscape position.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes X No ___	Depth (inches):	7"
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	Surface

Wetland Hydrology Present? Yes X No ___

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

Remarks:

The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-57

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Footslope | Local relief (concave, convex, none): concave

Slope (%): 2% | Lat: 42.662479 | Long: -87.872678 | Datum: NAD83 UTM16N

Soil Map Unit Name: Am - Alluvial land | NWI classification: T3K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	35%	Yes	OBL
2. *Populus deltoides*	30%	Yes	FAC
3. *Acer negundo*	5%	No	FAC
4.			
5.			
	70%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	15%	Yes	FAC
2. *Ribes hirtellum*	5%	Yes	FACW
3.			
4.			
5.			
	20%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	15%	Yes	FACW
2. *Rhamnus cathartica*	5%	Yes	FAC
3. *Toxicodendron rydbergii*	3%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	23%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	5%	Yes	FACW
2.			
	5%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
			A/B
OBL species	35%	x1 =	0.35
FACW species	25%	x2 =	0.5
FAC species	58%	x3 =	1.74
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.18 (A)		2.59 (B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Herbaceous cover is variable.

SOIL

Sampling Point: DP-57

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5"	10YR 2/1	100					Loam	
5-23"	10YR 2/1	70	7.5YR 4/6	30	C	M	Clay Loam	
23-29"	10YR 5/1	90	10YR 6/8	10	C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	N/A
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	21"

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

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

Remarks:

The feature is associated with a stream and may flood in spring.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-58

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 3% | Lat: 42.662542 | Long: -87.872843 | Datum: NAD83 UTM16N

Soil Map Unit Name: Am - Alluvial land | NWI classification: T3K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. Heavily disturbed site due to recent bike path construction. RCG monoculture creeps upslope all along roadside.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	95%	Yes	FACW
2. *Cirsium arvense*	5%	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	95%	x2 =	1.9
FAC species		x3 =	
FACU species	5%	x4 =	0.2
UPL species		x5 =	
Column Totals:	1.00 (A)		2.1 (B)

Prevalence Index = B/A = 2.10

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- ____ 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Reed canary grass extends upslope from the wetland.

SOIL

Sampling Point: DP-58

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 3/2	100					Loam	
20-24"	10YR 3/3	100					Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-59

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 2% | Lat: 42.664392 | Long: -87.871559 | Datum: NAD83 UTM16N

Soil Map Unit Name: Am - Alluvial land | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wooded swamp associated with a stream.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	40%	Yes	OBL
2. *Populus deltoides*	25%	Yes	FAC
3. *Acer negundo*	10%	No	FAC
4. *Acer saccharinum*	2%	No	FACW
5.			
	77%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5%	Yes	FAC
2. *Salix interior*	5%	Yes	FACW
3.			
4.			
5.			
	10%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	30%	Yes	FACW
2. *Impatiens capensis*	20%	Yes	FACW
3. *Solidago gigantea*	10%	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	60%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
	That Are OBL, FACW, or FAC:		A/B
OBL species	40%	x1 =	0.4
FACW species	67%	x2 =	1.34
FAC species	40%	x3 =	1.2
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.47 (A)		2.94 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
X 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The herbaceous is dense in areas.

SOIL

Sampling Point: DP-59

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	10YR 3/2	100					Loam	
8-20"	10YR 5/2	100					Silt Loam	
20-24"	10YR 3/3	98	7.5YR 4/4	2	C	M	Silt Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:

Soils may have historically been disturbed as this feature is in a roadside ditch. Also, it is associated with a perennial stream and may receive sediment deposits that obscure some hydric indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:

Drainage way meets with the Pike River. Understory is sparsley vegetated along the drainage way.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-60

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): convex

Slope (%): 10% | Lat: 42.664409 | Long: -87.871623 | Datum: NAD83 UTM16N

Soil Map Unit Name: Am - Alluvial land | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a wooded roadside.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra*	25%	Yes	FACU
2. *Acer negundo*	20%	Yes	FAC
3.			
4.			
5.			
	45%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5%	Yes	FAC
2. *Salix interior*	5%	Yes	FACW
3.			
4.			
5.			
	10%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	30%	Yes	FACW
2. *Poa pratensis*	15%	Yes	FAC
3. *Hesperis matronalis*	15%	Yes	FACU
4. *Arctium minus*	10%	No	FACU
5. *Daucus carota*	5%	No	UPL
6. *Alliaria petiolata*	5%	No	FAC
7. *Ambrosia trifida*	2%	No	FAC
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	82%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
		That Are OBL, FACW, or FAC:	A/B
OBL species		x1 =	
FACW species	35%	x2 =	0.7
FAC species	47%	x3 =	1.41
FACU species	50%	x4 =	2
UPL species	5%	x5 =	0.25
Column Totals:	1.37 (A)		4.36 (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Reed canary grass is extending upslope from the wetland.

SOIL

Sampling Point: DP-60

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10"	10YR 3/3	100					Loam	
10-20"	10YR 6/6	70	10YR 2/2	30	C	M	Silt Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-61

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.666137 | Long: -87.87049 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wet ditch of cattails.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	85%	Yes	OBL
2. *Phalaris arundinacea*	15%	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	A/B
OBL species	85%	x1 =	0.85
FACW species	15%	x2 =	0.3
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.00 (A)		1.15 (B)

Prevalence Index = B/A = 1.15

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-61

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/2	95	10YR 6/6	5	C	M	Silt Loam	
16-24"	10YR 5/1	95	10YR 6/6	5	C	M	Silty Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	N/A
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	16"

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

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

Remarks:

The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-62

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 10% | Lat: 42.666155 | Long: -87.870434 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB2 - Ozaukee silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on the backside of a road right of way.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	25%	Yes	FAC
2. *Cirsium arvense*	15%	Yes	FACU
3. *Heliopsis helianthoides*	15%	Yes	FACU
4. *Phalaris arundinacea*	10%	No	FACW
5. *Daucus carota*	10%	No	UPL
6. *Sonchus arvensis*	10%	No	FACU
7. *Solidago canadensis*	5%	No	FACU
8. *Asclepias syriaca*	5%	No	FACU
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	95%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	10%	x2 =	0.2
FAC species	25%	x3 =	0.75
FACU species	50%	x4 =	2
UPL species	10%	x5 =	0.5
Column Totals:	0.95 (A)		3.45 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-62

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 3/3	100					Loam	
20-24"	10YR 4/4	100					Silty Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-63

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0% | Lat: 42.662362 | Long: -87.873683 | Datum: NAD83 UTM16N

Soil Map Unit Name: MeB2 - Markham silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wet roadside ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	5%	Yes	FACW
2.			
3.			
4.			
5.			
	5% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	30%	Yes	FACW
2. *Scirpus atrovirens*	20%	Yes	OBL
3. *Carex lacustris*	15%	No	OBL
4. *Solidago gigantea*	10%	No	FACW
5. *Eleocharis palustris*	10%	No	OBL
6. *Poa pratensis*	5%	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	90% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	45%	x1 =	0.45
FACW species	45%	x2 =	0.9
FAC species	5%	x3 =	0.15
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.95 (A)		1.5 (B)

Prevalence Index = B/A = 1.58

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-63

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 2/1	100					Mucky Loam	
2-22"	10YR 2/1	98	10YR 5/6	2	C	M	Clay	
22-28"	10YR 6/1	100					Sand	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:
Depleted sand was found under a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): N/A

Water Table Present? Yes ___ No X Depth (inches): N/A

Saturation Present? Yes X No ___ Depth (inches): Surface

(includes capillary fringe)

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

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

Remarks:
The feature may hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-64

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 2

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.662348 | Long: -87.872596 | Datum: NAD83 UTM16N

Soil Map Unit Name: MeB2 - Markham silt loam, 2 to 6 percent slopes, eroded | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is near a roadside shoulder.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra*	10%	Yes	FACU
2.			
3.			
4.			
5.			
	10%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Poa pratensis*	50%	Yes	FAC
2. *Hypericum perforatum*	20%	Yes	FACU
3. *Cirsium arvense*	10%	No	FACU
4. *Phalaris arundinacea*	5%	No	FACW
5. *Achillea millefolium*	5%	No	FACU
6. *Daucus carota*	2%	No	UPL
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	92%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	5%	x2 =	0.1
FAC species	50%	x3 =	1.5
FACU species	45%	x4 =	1.8
UPL species	2%	x5 =	0.1
Column Totals:	1.02 (A)		3.5 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-64

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 4/3	100					Silt Loam	
2-18"	10YR 5/4	100					Clay	Gravel Inclusions
18-24"	10YR 5/1	65	7.5YR 5/4	33	C	M	Clay	
			5YR 4/6	2	C	M		

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-65

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 34

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave

Slope (%): 1% | Lat: 42.669609 | Long: -87.885324 | Datum: NAD83 UTM16N

Soil Map Unit Name: AtA - Ashkum silty clay loam, 0 to 2 percent slopes | NWI classification: S3/E1K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a shallow marsh of cattails with a wet meadow fringe.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Solidago gigantea*	25%	Yes	FACW
2. *Carex stricta*	20%	Yes	OBL
3. *Typha x glauca*	20%	Yes	OBL
4. *Asclepias incarnata*	15%	No	OBL
5. *Rhamnus cathartica*	2%	No	FAC
6. *Salix interior*	2%	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	84%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	55%	x1 =	0.55
FACW species	27%	x2 =	0.54
FAC species	2%	x3 =	0.06
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.84 (A)		1.15 (B)

Prevalence Index = B/A = 1.37

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Much of the wetland is dominated by cattails.

SOIL

Sampling Point: DP-65

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	10YR 2/1	95	10YR 6/6	5	C	M	Silt Loam	
8-20"	10YR 6/1	95	10YR 5/6	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes X No ___	Depth (inches):	12"
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	Surface

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

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

Remarks:

The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-66

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 34

Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): convex

Slope (%): 4% | Lat: 42.669578 | Long: -87.8852 | Datum: NAD83 UTM16N

Soil Map Unit Name: AtA - Ashkum silty clay loam, 0 to 2 percent slopes | NWI classification: S3/E1K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a fallow area between a railroad and a shallow marsh.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Solidago canadensis*	25%	Yes	FACU
2. *Melilotus officinalis*	20%	Yes	FACU
3. *Monarda fistulosa*	15%	Yes	FACU
4. *Helianthus hirsutus*	10%	No	UPL
5. *Phalaris arundinacea*	10%	No	FACW
6. *Cirsium arvense*	10%	No	FACU
7. *Euthamia graminifolia*	5%	No	FACW
8. *Rhamnus cathartica*	2%	No	FAC
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	97%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
			A/B
OBL species		x1 =	
FACW species	15%	x2 =	0.3
FAC species	2%	x3 =	0.06
FACU species	70%	x4 =	2.8
UPL species	10%	x5 =	0.5
Column Totals:	0.97 (A)		3.66 (B)

Prevalence Index = B/A = 3.77

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-66

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 3/2	100					Loam	
16-22"	10YR 3/2	100					Clay	
22-28"	10YR 4/1	95	10YR 5/4	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-67

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 34

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 1% | Lat: 42.669523 | Long: -87.890601 | Datum: NAD83 UTM16N

Soil Map Unit Name: AtA - Ashkum silty clay loam, 0 to 2 percent slopes | NWI classification: F0Kf

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a depression of cattails in an agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	65%	Yes	OBL
2. *Phalaris arundinacea*	35%	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	A/B
That Are OBL, FACW, or FAC:			
OBL species	65%	x1 =	0.65
FACW species	35%	x2 =	0.7
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.00 (A)		1.35 (B)

Prevalence Index = B/A = 1.35

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-67

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10"	10YR 2/1	100					Clay Loam	
10-36"	10YR 2/1	100					Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:

Unable to retrieve B horizon. Soils assumed to meet A12 based on obvious hydric vegetation and landscape position.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:

The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/18/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-68

Investigator(s): K. Carlson, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 34

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): convex

Slope (%): 5% | Lat: 42.669482 | Long: -87.890515 | Datum: NAD83 UTM16N

Soil Map Unit Name: AtA - Ashkum silty clay loam, 0 to 2 percent slopes | NWI classification: F0Kf

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a wheat field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Triticum aestivum*	40%	Yes	UPL
2. *Ambrosia artemisiifolia*	20%	Yes	FACU
3. *Sonchus arvensis*	10%	No	FACU
4. *Ambrosia trifida*	10%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	80%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	10%	x3 =	0.3
FACU species	30%	x4 =	1.2
UPL species	40%	x5 =	2
Column Totals:	0.80 (A)		3.5 (B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The crop appears healthy.

SOIL

Sampling Point: DP-68

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24"	10YR 2/1	100					Loam	
24-30"	10YR 5/2	100					Silty Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-69

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.669537 | Long: -87.894822 | Datum: NAD83 UTM16N

Soil Map Unit Name: VaB - Varna silt loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a roadside ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	40%	Yes	FACW
2. *Carex stricta*	25%	Yes	OBL
3. *Poa pratensis*	10%	No	FAC
4. *Cirsium arvense*	5%	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	80%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	25%	x1 =	0.25
FACW species	40%	x2 =	0.8
FAC species	10%	x3 =	0.3
FACU species	5%	x4 =	0.2
UPL species		x5 =	
Column Totals:	0.80 (A)		1.55 (B)

Prevalence Index = B/A = 1.94

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation was mowed, but was able to be idenitified.

SOIL

Sampling Point: DP-69

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 3/2	100					Silty Clay	
2-24"	10YR 5/2	95	10YR 5/6	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
The feature appears to convey surface water during rain events.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-70

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.669537 | Long: -87.894822 | Datum: NAD83 UTM16N

Soil Map Unit Name: VaB - Varna silt loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on a road shoulder.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Dactylis glomerata*	15%	Yes	FACU
2. *Poa pratensis*	15%	Yes	FAC
3. *Convolvulus arvensis*	15%	Yes	UPL
4. *Cirsium arvense*	15%	Yes	FACU
5. *Ambrosia artemisiifolia*	15%	Yes	FACU
6. *Chenopodium album*	10%	No	FACU
7. *Daucus carota*	10%	No	UPL
8. *Schedonorus arundinaceus*	5%	No	FACU
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	15%	x3 =	0.45
FACU species	60%	x4 =	2.4
UPL species	25%	x5 =	1.25
Column Totals:	1.00 (A)		4.1 (B)

Prevalence Index = B/A = 4.10

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation was mowed, but was still able to be identified.

SOIL

Sampling Point: DP-70

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/1	100					Silty Clay	
16-24"	10YR 4/2	50	10YR 4/4	50	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-71

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 4

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.66827 | Long: -87.895149 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a seasonally flooded basin in an agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Persicaria maculosa*	60%	Yes	FACW
2. *Amaranthus retroflexus*	25%	Yes	FACU
3. *Echinochloa crus-galli*	5%	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	90%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	65%	x2 =	1.3
FAC species		x3 =	
FACU species	25%	x4 =	1
UPL species		x5 =	
Column Totals:	0.90 (A)		2.3 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Lower portions of the feature has no vegetation due to flooding.

SOIL

Sampling Point: DP-71

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 2/1	100					Clay Loam	
18-24"	10YR 4/2	85	10YR 4/6	15	C	M	Silty Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Lower portions of the feature contained surface water at time of survey.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-72

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 4

Landform (hillslope, terrace, etc.): Shoulder | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.668271 | Long: -87.895223 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a fallow field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Portulaca oleracea*	75%	Yes	FACU
2. *Amaranthus retroflexus*	10%	No	FACU
3. *Persicaria maculosa*	5%	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	90%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	5%	x2 =	0.1
FAC species		x3 =	
FACU species	85%	x4 =	3.4
UPL species		x5 =	
Column Totals:	0.90 (A)		3.5 (B)

Prevalence Index = B/A = 3.89

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The field had not been planted this season.

SOIL

Sampling Point: DP-72

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 2/1	100					Clay Loam	
20-26"	10YR 4/1	95	10YR 6/6	5	C	M	Silty Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soils were observed; however the community of annuals at the point is distinctly different from that within the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Kenosha County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-73

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 2N, RNG 22E, SEC 4

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.667953 | Long: -87.895389 | Datum: NAD83 UTM16N

Soil Map Unit Name: EtB - Elliott silty clay loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a swale of cattails draining an agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Typha X glauca*	40%	Yes	OBL
2. *Phalaris arundinacea*	20%	Yes	FACW
3. *Persicaria maculosa*	5%	No	FACW
4. *Rumex Crispus*	5%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	70%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	40%	x1 =	0.4
FACW species	25%	x2 =	0.5
FAC species	5%	x3 =	0.15
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.70 (A)		1.05 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-73

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/1	100					Silty Clay	
16-22"	10YR 2/1	95	10YR 5/6	5	C	M	Silty Clay	
22-28"	10YR 4/2	80	10YR 5/6	20	C	M	Silty Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-74

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.669942 | Long: -87.90566 | Datum: NAD83 UTM16N

Soil Map Unit Name: EtB - Elliott silty clay loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a wet railroad ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Equisetum hyemale*	35%	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	35%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	35%	x2 =	0.7
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.35 (A)		0.7 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is similar throughout.

SOIL

Sampling Point: DP-74

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/1	100					Mucky Loam	
4-8"	10YR 2/1	100					Silty Clay Loam	
8-24"	10YR 4/1	85	10YR 5/4	15	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:
The surface is greasy.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X 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)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Algal crust was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-75

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): convex

Slope (%): 0-2% | Lat: 42.669951 | Long: -87.905822 | Datum: NAD83 UTM16N

Soil Map Unit Name: EtB - Elliott silty clay loam, 2 to 6 percent slopes | NWI classification: S3/E2K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is on a rise between a wet forest and a railroad ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	25%	Yes	FACW
2. *Robinia pseudoacacia*	5%	No	FACU
3.			
4.			
5.			
	30%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	25%	Yes	FACW
2. *Vitis riparia*	25%	Yes	FACW
3. *Asclepias syriaca*	5%	No	FACU
4. *Lactuca biennis*	5%	No	FAC
5. *Solanum ptychanthum*	5%	No	FACU
6. *Solidago canadensis*	5%	No	FACU
7. *Cirsium arvense*	5%	No	FACU
8. *Geum aleppicum*	5%	No	FACW
9. *Impatiens capensis*	5%	No	FACW
10. *Rhamnus cathartica*	5%	No	FAC
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	90%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	85%	x2 =	1.7
FAC species	10%	x3 =	0.3
FACU species	25%	x4 =	1
UPL species		x5 =	
Column Totals:	1.20 (A)		3 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:

X 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

___ 3-Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The vegetation is dense and weedy.

SOIL

Sampling Point: DP-75

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 2/1	100					Clay Loam	
20-24"	10YR 5/4	95	10YR 6/6	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-76

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.669924 | Long: -87.906097 | Datum: NAD83 UTM16N

Soil Map Unit Name: EtB - Elliott silty clay loam, 2 to 6 percent slopes | NWI classification: S3/E2K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a small depressional forest.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	85%	Yes	FACW
2. *Salix nigra*	10%	No	OBL
3.			
4.			
5.			
	95%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer saccharinum*	15%	Yes	FACW
2.			
3.			
4.			
5.			
	15%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
		= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
	That Are OBL, FACW, or FAC:		A/B
OBL species	10%	x1 =	0.1
FACW species	100%	x2 =	2
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	1.10 (A)		2.1 (B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
The herbaceous layer is sparse throughout.

SOIL

Sampling Point: DP-76

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/1	98	10YR 3/6	2	C	M	Clay Loam	
16-24"	10YR 4/2	95	10YR 4/4	3	C	M	Clay	
			10YR 5/6	2	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
The feature appears to hold surface during a portion of the growing season.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-77

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): convex

Slope (%): 0-2% | Lat: 42.669597 | Long: -87.90755 | Datum: NAD83 UTM16N

Soil Map Unit Name: VaB - Varna silt loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a seasonally flooded basin in a soybean field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Persicaria hydropiperoides*	20%	Yes	OBL
2. *Glycine max*	15%	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	35%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	20%	x1 =	0.2
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species	15%	x5 =	0.75
Column Totals:	0.35 (A)		0.95 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
The crop is stunted.

SOIL

Sampling Point: DP-77

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22"	10YR 2/1	100					Clay Loam	
22-30"	7.5YR 5/2	70	7.5YR 5/6	30	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
The crop is not as healthy as in other areas of the field.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-78

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Footslope | Local relief (concave, convex, none): convex

Slope (%): 3% | Lat: 42.669656 | Long: -87.907644 | Datum: NAD83 UTM16N

Soil Map Unit Name: VaB - Varna silt loam, 2 to 6 percent slopes | NWI classification: None

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a soybean field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	45%	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	45%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species	45%	x5 =	2.25
Column Totals:	0.45 (A)		2.25 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The crop is healthy.

SOIL

Sampling Point: DP-78

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 2/1	100					Loam	
18-24"	10YR 4/2	90	10YR 4/3	10	C	M	Clay Loam	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-79

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope (%): 0-2% | Lat: 42.669984 | Long: -87.907474 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The feature is a seasonally flooded basin in a soybean field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Persicaria hydropiperoides*	15%	Yes	OBL
2. *Glycine max*	15%	Yes	UPL
3. *Portulaca oleracea*	5%	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	35%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	15%	x1 =	0.15
FACW species		x2 =	
FAC species		x3 =	
FACU species	5%	x4 =	0.2
UPL species	15%	x5 =	0.75
Column Totals:	0.35 (A)		1.1 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The crop is stunted.

SOIL

Sampling Point: DP-79

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 2/1	100					Silt Loam	
16-24"	10YR 5/2	95	10YR 5/4	5	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Redox features were found in a depleted layer beneath a dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
The crop is not as healthy as in other areas of the field.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-80

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 33

Landform (hillslope, terrace, etc.): Footslope | Local relief (concave, convex, none): convex

Slope (%): 3-7% | Lat: 42.669965 | Long: -87.907373 | Datum: NAD83 UTM16N

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 X No ____ (If no, explain in Remarks.)

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The point is in a soybean field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	45%	Yes	UPL
2. *Portulaca oleracea*	5%	No	FACU
3. *Chenopodium album*	2%	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	52%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species	7%	x4 =	0.28
UPL species	45%	x5 =	2.25
Column Totals:	0.52 (A)		2.53 (B)

Prevalence Index = B/A = 4.87

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The crop is healthy.

SOIL

Sampling Point: DP-80

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 2/2	100					Clay Loam	
18-24"	10YR 4/4	100					Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: CTH KR, CTH H to Old Green Bay Road | City/County: Racine County | Sampling Date: 7/25/2018

Applicant/Owner: Wisconisn Dept. of Transportation | State: WI | Sampling Point: DP-81

Investigator(s): C. Firkus, E. Englund | Section, Township, Range: TWP 3N, RNG 22E, SEC 35

Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): convex

Slope (%): 3-7% | Lat: 42.66859 | Long: -87.857103 | Datum: NAD83 UTM16N

Soil Map Unit Name: MzdB - Ozaukee silt loam, 2 to 6 percent slopes | NWI classification: T3K

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

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

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

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

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

Remarks:
WETS analysis determined that the antecedent precipitation conditions were normal. The area is mapped as wetland by the WWI; however the actual feature is outside the survey area.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	40%	Yes	FACW
2.			
3.			
4.			
5.			
	40%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Zanthoxylum americanum*	40%	Yes	FACU
2. *Fraxinus pennsylvanica*	10%	Yes	FACW
3.			
4.			
5.			
	50%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Cornus racemosa*	15%	Yes	FAC
2. *Galium triflorum*	10%	Yes	FACU
3. *Carex pensylvanica*	10%	Yes	UPL
4. *Geum aleppicum*	10%	Yes	FACW
5. *Viburnum lentago*	10%	Yes	FAC
6. *Agrimonia gryposepala*	5%	No	FACU
7. *Eurybia macrophylla*	5%	No	FACU
8. *Persicaria virginiana*	5%	No	FAC
9. *Solidago gigantea*	5%	No	FACW
10. *Rubus idaeus*	5%	No	FACU
11. *Carex blanda*	5%	No	FAC
12. *Arisaema triphyllum*	2%	No	FACW
13. *Arisaema dracontium*	2%	No	FACW
14. *Circaea canadensis*	2%	No	FACU
15.			
16.			
17.			
18.			
19.			
20.			
	91%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	69%	x2 =	1.38
FAC species	35%	x3 =	1.05
FACU species	67%	x4 =	2.68
UPL species	10%	x5 =	0.5
Column Totals:	1.81 (A)		5.61 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
The canopy transitions to black ash in the wetland.

SOIL

Sampling Point: DP-81

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 2/1	100					Clay Loam	
18-24"	10YR 4/3	97	10YR 5/4	3	C	M	Clay	

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

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
No hydric soils indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
No wetland hydrology was observed.

CTH KR - CTH H to Old Green Bay Rd

APPENDIX

C

WisDOT Community Classification Guide

Table 1C. Wetland Type Classification for the Wisconsin Wetland Mitigation Bank.

Cir39 Classification	Wetland Type Bank Site *	Examples of Vegetational Community Types
1A Seasonally flooded basin or flat	Riparian wetland (RPF) (wooded)	Floodplain Forest (includes Bottomland Hardwood forests **), Riparian Shrub Carr and Alder Thickets
1B Seasonally flooded basin or flat	Riparian wetland (RPE) (emergent)	Riparian Wet and Sedge Meadows, Bars and Mudflats
2 Inland fresh meadow	Wet Meadow (M)	Wet Meadow, Wet/Wet Mesic Prairie, Sedge Meadow, Vernal pools, (also includes Fens **)
3 Inland shallow fresh marsh	Shallow Marsh (SM)	Emergent Aquatic
4 Inland deep fresh marsh	Deep Marsh (DM)	Emergent and Submergent Aquatic
5 Inland open fresh water	Aquatic Bed (AB)	Submergent Aquatic, Aquatic Bed (depth less than 3 Meters)
6 Shrub swamp	Shrub Scrub (SS)	Shrub Carr, Alder Thicket
7 Wooded swamp	Wooded Swamp (WS) (Forested Wetland)	Wet/Wet-Mesic Deciduous Forests White Cedar Swamps
8 Bog	Bog (Bog)	Open Bog, Forested Bog

* Wetland types used for purposes of this bank system.
These should be refered to by name or by acronym (e.g. RPF, SM, AB, etc.)
** Red flag wetlands