

# Wetland Delineation Report

## **Krueger Property**

Town of Perry, Dane County, Wisconsin June 21, 2021

Project Number: 20210478

## **Krueger Property**

Town of Perry, Dane County, Wisconsin June 21, 2021

#### **Prepared for:**

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## 1.0 Introduction

Heartland Ecological Group, Inc. ("Heartland") completed a wetland determination and delineation on the Krueger Property site on May 7, 2021 at the request of Brett Krueger. Fieldwork was completed by Scott Fuchs, Environmental Scientist (Appendix E, Qualifications). The 4.64-acre site (the "Study Area") is located along York Valley Road, approximately 1 mile north of its intersection with State Highway 39, in the southeast ¼ of Section 34, T5N, R6E, Town of Perry, Dane County, WI (Figure 1, Appendix A). The purpose of the wetland delineation was to determine the location and extent of wetlands within the Study Area.

Four (4) wetland areas totaling approximately 0.15 acres were delineated and mapped within the Study Area (Figure 6, Appendix A). Wetlands discussed in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the WDNR, and local zoning authorities. Heartland recommends this report be submitted to local authorities, the WDNR, and USACE for final jurisdictional review and concurrence.



## 2.0 Methods

#### 2.1 Wetlands

Wetlands were determined and delineated using the criteria and methods described in the USACE Wetlands Delineation Manual, T.R. Y-87-1 ("1987 Corps Manual") and the applicable Regional Supplement to the Corps of Engineers Wetland Delineation Manual. In addition, the Guidance for Submittal of Delineation Reports to the St. Paul District USACE and the WDNR (WDNR, 2015) was followed in completing the wetland delineation and report.

Determinations and delineations utilized available resources including the U.S. Geological Survey's (USGS) *WI 7.5 Minute Series (Topographic) Map* (Figure 2, Appendix A), the Natural Resource Conservation Service's (NRCS) Soil Survey Geographic Database (SSURGO), U.S. Department of Agriculture's (USDA) *Web Soil Survey* (Figure 3, Appendix A), the Wisconsin Department of Natural Resources' *Surface Water Data Viewer's* wetland indicator data layer (Figure 4, Appendix A), the WDNR's *Wisconsin Wetland Inventory* data layer (Figure 5, Appendix A), and aerial imagery available through the USDA Farm Service Agency's (FSA) National Agriculture Imagery Program (NAIP). The USGS *National Hydrography Dataset* is included on Figures 2 and 5, Appendix A.

Wetland determinations were completed on-site at sample points, often along transects, using the three (3) criteria (vegetation, soil, and hydrology) approach per the 1987 Corps Manual and the Regional Supplement. Procedures in these sources were followed to demonstrate that, under normal circumstances, wetlands were present or not present based on a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology.

Recent weather conditions influence the visibility or presence of certain wetland hydrology indicators. An assessment of recent precipitation patterns helps to determine if climatic/hydrologic conditions were typical when the field investigation was completed. Therefore, a review of the antecedent precipitation in the three (3) months leading up to the field investigation was completed. Using a WETS analysis developed by the NRCS, the amounts of precipitation in these three (3) months were compared to averages and standard deviation thresholds over the past 30 years to generally represent if conditions encountered during the investigation were normal, wet, or dry. Recent precipitation events



in the week prior to the investigation were considered while interpreting wetland hydrology indicators. In some cases, the Palmer Drought Index was checked for long-term drought or moist conditions (NOAA, 2018).

The uppermost wetland boundary and sample points were identified and marked with wetland flagging and located with a Global Positioning System (GPS) capable of sub-meter accuracy. In some cases, wetland flagging was not utilized to mark the boundary and the location was only recorded with a GPS unit, particularly in active agricultural areas. The GPS data was then used to map the wetlands using ESRI ArcMap<sup>TM</sup> 10.6 software.

## 3.0 Results and Discussion

## 3.1 Desktop Review

#### **Climatic Conditions**

According to the WETS analysis using the previous three (3) months of precipitation data, conditions encountered at the time of the fieldwork were expected to be dry for the time of year (Appendix B). The Palmer Drought Index was checked on line and the long-term conditions at the time of the fieldwork were in the mild wetness range. Fieldwork was completed outside the dry-season based on long-term regional hydrology data utilized in the WebWIMP Climatic Water Balance web site.

### General Topography and Land Use

West of York Valley Road, the topography within the Study Area was steeply sloping downhill to the east. East of York Valley Road, the topography was gently sloping to the east, towards an unnamed tributary of Kittleson Valley Creek. A topographic high of approximately 1,005 feet above mean sea level (msl) is present along the western boundary of the Study Area, and a topographic low of 930 feet above msl is present within the unnamed creek channel, which makes up a portion of the eastern boundary of the Study Area (Figures 2 and 6, Appendix A). Land cover and land use within the Study Area consists of woodlands, pasture, and agricultural outbuildings. Surrounding areas are primarily agricultural row cropping, pasture, and woodlands. General drainage is to the east towards the unnamed tributary of Kittleson Valley Creek.



## Soil Mapping

Soils mapped by the NRCS Soil Survey within the Study Area and their hydric status are summarized in Table 1. Wetlands identified during the field investigation are located primarily within areas mapped as predominantly non-hydric soils (Figures 3 and 4, Appendix A).

Table 1. Summary of NRCS Mapped Soils within the Study Area

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
1130F: Lacrescent- Dunbarton complex, very stony, 30 to 60 percent slopes	Lacrescent- Very stony	50-70	Hills	No
	Dunbarton- Very stony	20-40	Hills	No
	Elevasil-St peter	1-10	Hills	No
	Boone-St peter	1-10	Hills	No
EmE2: Elkmound sandy loam, 20 to 30 percent slopes, eroded	Elkmound	100	Hills	No
HuA: Huntsville silt loam, 0 to 2 percent slopes	Huntsville	untsville 95 Flood plain		No
	Otter	5	Depressions	Yes
RaA: Radford silt loam, 0 to 3 percent slopes	Radford	80-95	Flood plains, drainageways	No
	Otter	2-8	Flood plains, drainageways	Yes
	Sable	2-5	Depressions	Yes
	Sebewa	1-4	Depressions	Yes
	Drummer	0-3	Depressions	Yes
SvD2: Seaton silt loam, driftless valley, 12 to 20 percent slopes, moderately eroded	Seaton	90-100	Knolls	No
	Greenridge	0-4	Knolls	No
	Council	0-3	Knolls	No
	Lambeau	0-3	Knolls	No



### **Wetland Mapping**

The Wisconsin Wetlands Inventory (WWI) mapping (Figure 5, Appendix A) does not depict any wetlands within the Study Area. The NHD depicts the unnamed tributary of Kittleson Valley Creek along the eastern boundary of the Study Area.

### 3.2 Field Review

Four (4) wetlands were identified and delineated within the Study Area. Wetland determination data sheets (Appendix C) were completed at 7 sample points that were representative of the wetland and upland conditions near the boundary and where potential wetlands may be present based on the desktop review and field reconnaissance. Appendix D provides photographs, typically at the sample point locations of the wetlands and adjacent uplands. The wetland boundary and sample point locations are shown on Figure 6 (Appendix A) and the wetlands are summarized in Table 2 and detailed in the following sections.

Table 2. Summary of Wetlands Identified within the Study Area

Wetland ID	Wetland Description	*Surface Water Connections	*NR151 Protective Area	Acreage (on-site)			
W-1	Sedge Meadow Stream Terrace	Contiguous to the unnamed tributary of Kittleson Valley Creek	Moderately susceptible, 50 feet	0.05			
W-2	Sedge Meadow Stream Terrace	Contiguous to the unnamed tributary of Kittleson Valley Creek	Moderately susceptible, 50 feet	0.02			
W-3	Sedge Meadow Depression	Potentially isolated	Moderately susceptible, 50 feet	0.01			
W-4	Sedge Meadow Swale / Stream Terrace	Contiguous to the unnamed tributary of Kittleson Valley Creek	Moderately susceptible, 50 feet	0.07			
*Classification based on Heartland's professional opinion. Jurisdictional authority of wetland and waterway protective areas under NR 151 lies with the WDNR. Local zoning authorities may have additional restrictions. USACE has authority for							

determining federal jurisdiction of wetlands and waterways.



### Wetlands 1, 2, and 4 (W-1, W-2, and W-4)

Wetlands 1, 2, and 4 (W-1, W-2, and W-4) are a combined 0.14-acres of sedge meadow vegetation located on stream terraces, swales, and/or stream meanders adjacent to the unnamed tributary of Kittleson Valley Creek.

Dominant vegetation observed in W-1, W-2, and W-4 consisted of fox sedge (*Carex vulpinoidea*, FACW) and awl-fruited sedge (*Carex stipata*, OBL).

The Redox Dark Surface (F6) hydric soil indicator was noted at sample points completed in W-1, W-2, and W-4.

The primary wetland hydrology indicators of High Water Table (A2) and Saturation (A3) were noted within W-1, W-2, and W-4, while secondary indicators included Geomorphic Position (D2) and a positive FAC-Neutral Test (D5). There is some evidence of groundwater discharge along the creek and these wetlands may be partially hydrologically supported by groundwater discharge.

Wetlands W-1, W-2, and W-4 are contiguous with the unnamed tributary of Kittleson Valley Creek, which makes up a portion of the eastern boundary of the Study Area. The boundaries of W-1, W-2, and W-4 generally followed poorly to moderately defined topographic breaks.

#### <u>Wetland 3 (W-3)</u>

Wetland W-3 is a small (0.01-acre) depression that is separated from the unnamed tributary of Kittleson Valley Creek and its adjacent wetlands by a berm.

Dominant vegetation observed in W-3 included fox sedge (*Carex vulpinoidea,* FACW), awlfruited sedge (*Carex stipata,* OBL), and Kentucky bluegrass (*Poa pratensis,* FAC).

The Redox Dark Surface (F6) hydric soil indicator was observed within W-3, which is consistent with depressions within the NRCS-mapped Huntsville silt loam soil type.

No primary wetland hydrology indicators were noted in W-2, however the secondary indicators of Geomorphic Position (D2), and a positive FAC-Neutral Test (D5) were noted. The uppermost 3 inches of soil were saturated due to recent precipitation.



The boundaries of W-3 and followed a poorly defined topographic break and were mainly determined by the presence/absence of hydrophytic vegetation.

## 3.3 Other Considerations

This report is limited to the identification and delineation of wetlands within the Study Area. Other regulated environmental resources that result in land use restrictions may be present within the Study Area that were not evaluated by Heartland (e.g. navigable waterways, floodplains, cultural resources, and threatened or endangered species).

Wisconsin Act 183 provides exemptions to permitting requirements for certain nonfederal wetlands. Nonfederal wetlands are wetlands that are not subject to federal jurisdiction. Exemptions apply to projects in urban areas with wetland impacts up to 1-acre per parcel. An urban area is defined as an incorporated area; an area within ½ mile of an incorporated area; or an area served by a sewerage system. Exemptions for nonfederal wetlands also apply to projects in rural areas with wetland impacts up to three (3) acres per parcel. Exemptions in rural areas only apply to structures with an agricultural purpose such as buildings, roads, and driveways. The determination of federal and nonfederal wetlands MUST be made by the USACE through an Approved Jurisdictional Determination (AJD). This report may be submitted to the USACE to assist with their determination.

Wis. Adm. Code NR 151 ("NR 151") requires that a "protective area" (buffer) be determined from the Ordinary High-Water Mark (OHWM) of lakes, streams and rivers, or at the delineated boundary of wetlands. Per NR 151.12, the protective area width for "less susceptible" wetlands is determined by using 10% of the average wetland width, no less than 10 feet or more than 30 feet. "Moderately susceptible" wetlands, lakes, and perennial and intermittent streams identified on recent mapping require a protective area width of 50 feet; while "highly susceptible wetlands" are associated with outstanding or exceptional resource waters in areas of special natural resource interest and require protective area width of 75 feet. Table 2 above lists the potential wetland buffers per NR 151 for each wetland identified based on Heartland's professional opinion. Please note that jurisdictional authority on wetland and waterway protective areas under NR 151 lies with the WDNR. Local zoning authorities and regional planning organizations may have additional land use restrictions within or adjacent to wetlands.



## 4.0 Conclusion

Heartland completed a wetland determination and delineation within the Krueger Property on May 7, 2021 at the request of Brett Krueger. Fieldwork was completed by Scott Fuchs, Environmental Scientist (see Appendix E, Qualifications). The Study Area lies in Section 34, T5N, R6E, Town of Perry, Dane County, WI.

Three (3) wetland areas were delineated and mapped within the 4.64-acre Study Area. The wetlands, which may be classified as sedge meadows along an unnamed tributary to Kittleson Valley Creek and an isolated sedge meadow depression, total approximately 0.15 acres within the Study Area.

Wetlands and waterways discussed in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the WDNR, and the local zoning authority. Heartland recommends this report be submitted to the USACE and WDNR for final jurisdictional review and concurrence. Review by local authorities may be necessary for determination of any applicable zoning and setback restrictions.

Heartland recommends that all applicable regulatory agency reviews and permits are obtained prior to beginning work within the Study Area or within or adjacent to wetlands or waterways. Heartland can assist with evaluating the need for additional environmental reviews, surveys, or regulatory agency coordination in consideration of the proposed activity and land use as requested but is outside of the scope of the wetland delineation.

Experienced and qualified professionals completed the wetland determination and delineation using standard practices and professional judgment. Wetland boundaries may be affected by conditions present within the Study Area at the time of the fieldwork. All final decisions on wetlands and their boundaries are made by the USACE, the WDNR, and/or sometimes a local unit of government. Wetland determination and boundary reviews by regulatory agencies may result in modifications to the findings presented to the Client. These modifications may result from varying conditions between the time the wetland delineation was completed and the time of the review. Factors that may influence the

#### WETLAND DELINEATION REPORT



findings may include but not limited to precipitation patterns, drainage modifications, changes or modification to vegetation, and the time of year.



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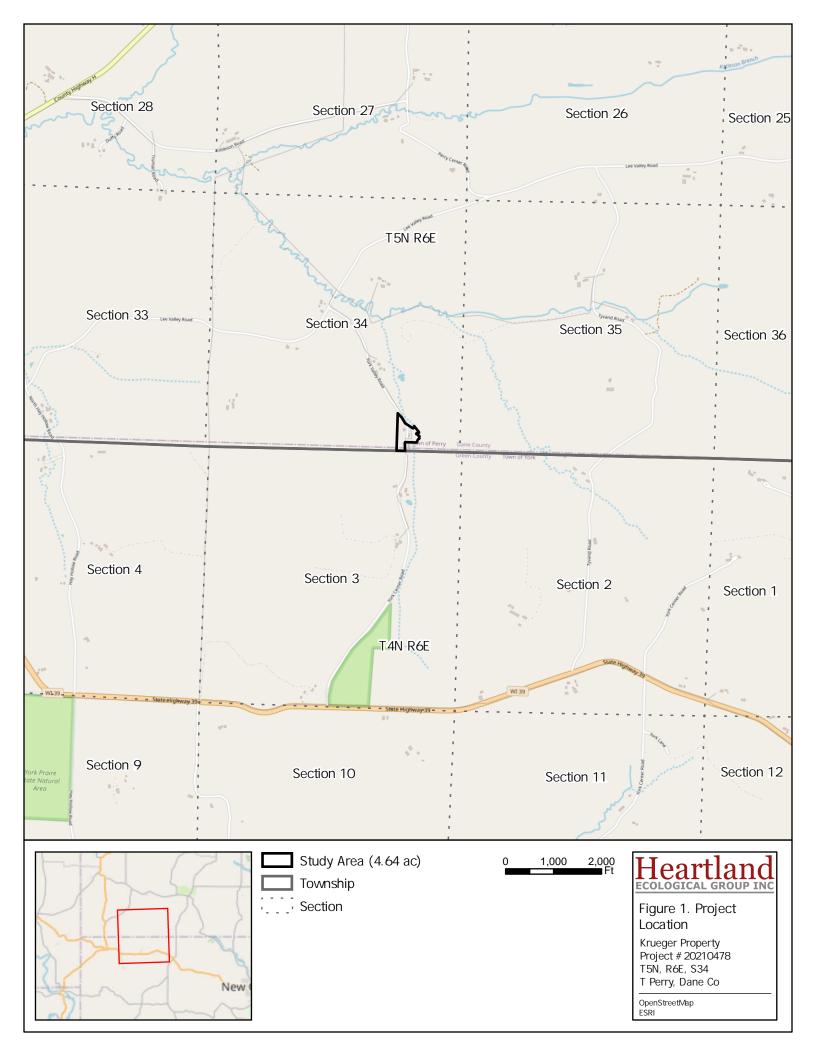
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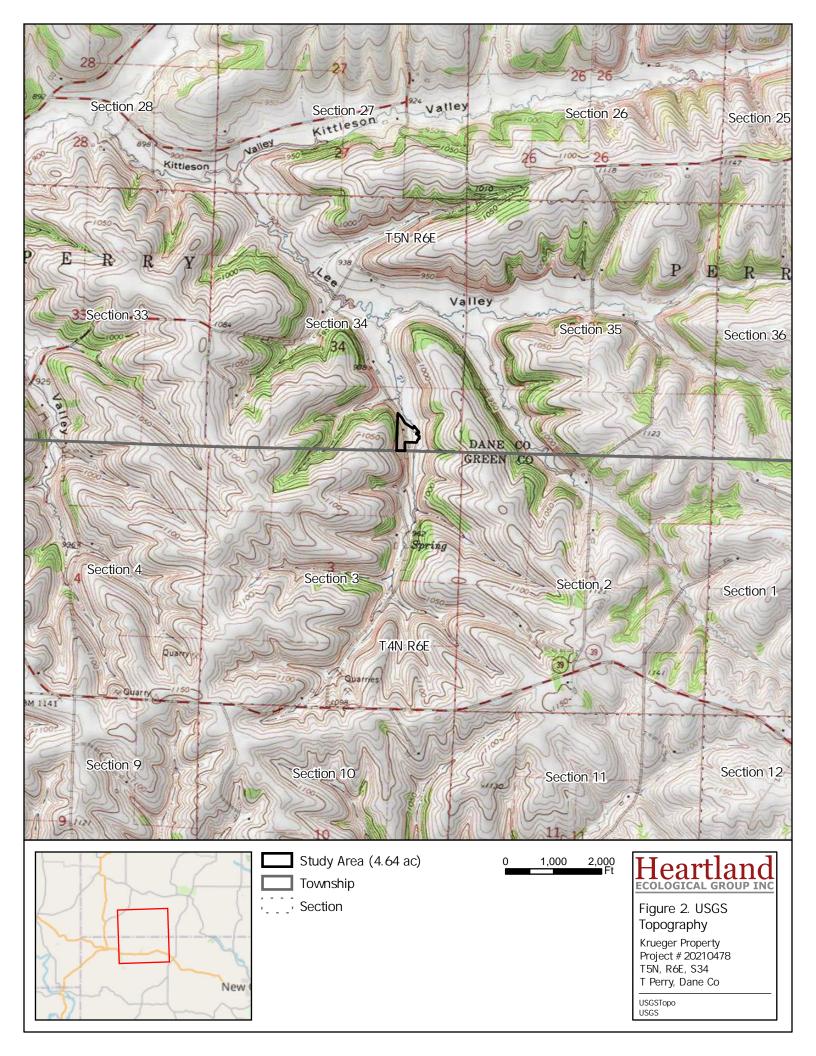


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## Appendix A | Figures

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## NRCS Soil Survey Data

- Predominantly Hydric (85-100%)
- Partially Hydric (15-84%)
- Predominantly Non-Hydric (1-14%)
  - Non-Hydric (0%)

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Figure 3. NRCS Hydric Soils

Krueger Property Project # 20210478 T5N, R6E, S34 T Perry, Dane Co

2020 NAIP NRCS





Maximum Extent Wetland Indicators

100 Ft 50

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Figure 4. SWDV Wetland Indicators

Krueger Property Project # 20210478 T5N, R6E, S34 T Perry, Dane Co

2020 NAIP WDNR

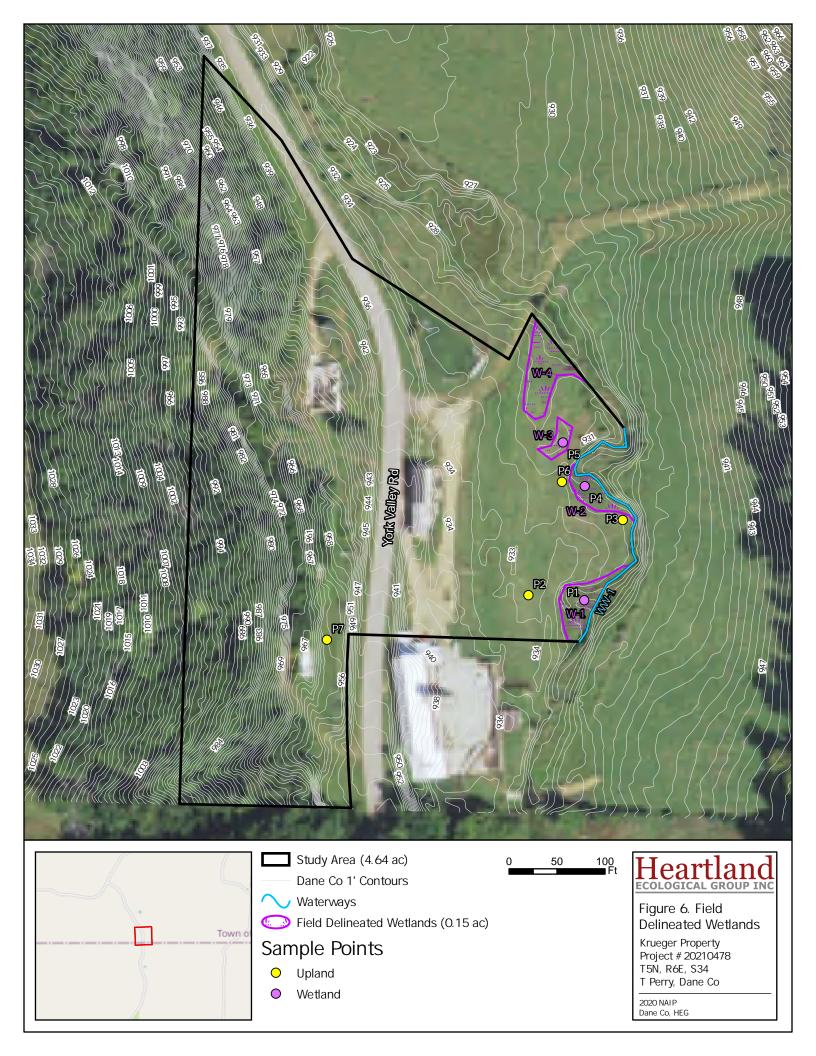




Figure 5. Wisconsin Wetland Inventory

Krueger Property Project # 20210478 T5N, R6E, S34 T Perry, Dane Co

2020 NAIP WDNR, USGS



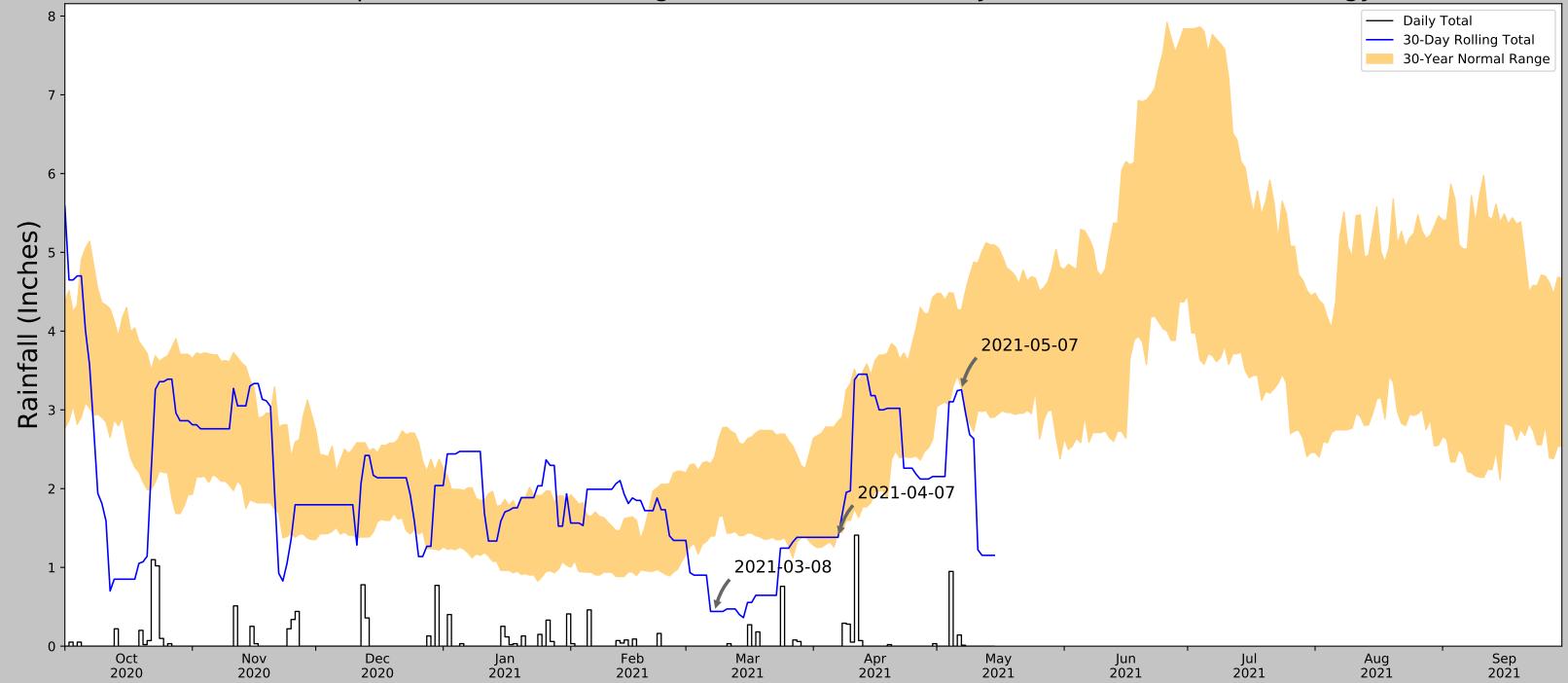


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## Appendix B | WETS Analysis

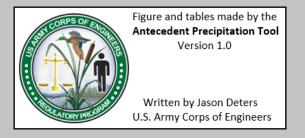
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## Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	42.85819, -89.76317
Observation Date	2021-05-07
Elevation (ft)	931.53
Drought Index (PDSI)	Mild wetness (2021-04)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-05-07	3.288189	4.270866	3.255906	Dry	1	3	3
2021-04-07	1.452756	2.853543	1.38189	Dry	1	2	2
2021-03-08	1.398032	2.400394	0.440945	Dry	1	1	1
Result							Drier than Normal - 6



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MONROE WWTP	42.5992, -89.6669	991.142	18.55	59.612	9.453	10912	89
NEW GLARUS 1.9 NNW	42.8363, -89.6535	901.903	5.758	29.627	2.762	0	1
MOUNT HOREB 3.6 SSW	42.9616, -89.7642	1162.074	7.145	230.544	4.863	288	0
MT HOREB	42.9881, -89.7419	1030.84	9.04	99.31	4.966	152	0
BELLEVILLE 1.7 ESE	42.8489, -89.5068	873.032	13.002	58.498	6.611	1	0



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## Appendix C | Wetland Determination Data Sheets

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## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property		City/Cour	nty: T Perry /	Dane Co	Sampling Date:	5/7/2021
Applicant/Owner: Brett Krueger				State: WI	Sampling Point:	P1
Investigator(s): Scott Fuchs, Heartland Ecological Group	р	Section, T	_ ownship, Ran	ge: T5N, R6E, S34		
Landform (hillside, terrace, etc.): Old Stream Meander		!	Local relief (co	ncave, convex, none):	Concave	
Slope (%): 1 - 3 Lat:		Long:			Datum:	
Soil Map Unit Name: Huntsville silt loam (HuA)				NWI classif	ication: N/A	
Are climatic / hydrologic conditions on the site typical fo	r this time of	year?	Yes	No X (If no, exp	lain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	ignificantly di	isturbed? F	Are "Normal Ci	rcumstances" present?	Yes X No	)
Are Vegetation , Soil , or Hydrology n			If needed, exp	lain any answers in Rer	marks.)	
SUMMARY OF FINDINGS – Attach site ma			g point loc	ations, transects,	important fea	tures, etc.
Hydrophytic Vegetation Present?         Yes         X         No           Hydric Soil Present?         Yes         X         No           Wetland Hydrology Present?         Yes         X         No			Sampled Arena a Wetland?	Yes X	No	
Remarks: A WETS analysis was performed and indicates that comeander - low lying area adjacent to current stream ch		in the drier th	nan normal rar	nge. Sample point recor	ded within an old s	tream
<b>VEGETATION</b> – Use scientific names of plan						
<u>Tree Stratum</u> (Plot size: 30ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	kehoot:	
1	70 OG V C I	ореоюз:	Otatus	Number of Dominant S	Species That	. (4)
2. 3.				Are OBL, FACW, or F		1 (A)
4.				Total Number of Domi Across All Strata:	nant Species	1 (B)
5.				Percent of Dominant S	 Species That	·
Sapling/Shrub Stratum (Plot size: 15ft )	=	Total Cover		Are OBL, FACW, or F.	•	0.0% (A/B)
1.			F	Prevalence Index wo	rksheet:	
2.				Total % Cover of:	Multiply	by:
3.				OBL species 5	x 1 =	5
4			[	FACW species 80		60
5		<del></del>	[	FAC species 0		0
Herb Stratum (Plot size: 5ft )	=	Total Cover		FACU species 3 UPL species 10		<u>12</u> 50
1. Carex vulpinoidea	80	Yes	FACW	Column Totals: 98		227 (B)
Pastinaca sativa	10	No	UPL	Prevalence Index =	` ′	
3. Glyceria grandis	5	No	OBL			
4. Glechoma hederacea	3	No	FACU	Hydrophytic Vegetati	on Indicators:	
5.					Hydrophytic Veget	ation
6.				X 2 - Dominance Te	st is >50%	
7.				X 3 - Prevalence Ind		
8					Adaptations <sup>1</sup> (Provi	
9.					s or on a separate	*
10					pphytic Vegetation <sup>1</sup>	` ' '
Woody Vine Stratum (Plot size: 30ft )	98 =	Total Cover		<sup>1</sup> Indicators of hydric so be present, unless dis		
1.				Hydrophytic		
2	=	Total Cover		Vegetation Present? Yes	X No	_
Remarks: (Include photo numbers here or on a separa Vegetation within the old meander dominated by Car v				<del></del>		_

SOIL Sampling Point: P1

Depth	Matrix		Redo	x realui				
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 12	10YR 2/1	95	10YR 3/6	5	C	M	Loamy/Clayey	MSiL
12 - 20	10YR 2/1	100					Loamy/Clayey	SiL
Type: C=Co	ncentration, D=Dep	letion, RM	=Reduced Matrix, N	MS=Mas	ked San	d Grains	. <sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.
lydric Soil II								rs for Problematic Hydric Soils
Histosol (	•		Sandy Gle	-				st Prairie Redox (A16)
	pedon (A2)		Sandy Re					Manganese Masses (F12)
Black His	` ,		Stripped N	,	5)			Parent Material (F21)
Hydrogen	Sulfide (A4)		Dark Surfa	ace (S7)				Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	-			Othe	er (Explain in Remarks)
2 cm Muc	` '		Loamy Gle	eyed Ma	trix (F2)			
Depleted	Below Dark Surface	e (A11)	Depleted I	Matrix (F	3)			
Thick Dar	k Surface (A12)		X Redox Da	rk Surfac	e (F6)		<sup>3</sup> Indicato	rs of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Depleted [	Dark Sur	face (F7)	)	wetla	and hydrology must be present,
5 cm Mud	cky Peat or Peat (S3	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
Restrictive L	ayer (if observed):							
Type:								
Type: Depth (ind Remarks:	ches):						Hydric Soil Presen	t? Yes <u>X</u> No
Depth (ind	, <u> </u>		_				Hydric Soil Presen	t? Yes <u>X</u> No
Depth (inc	GY		_				Hydric Soil Presen	t? Yes <u>X</u> No
Depth (independent of the property of the prop	GY Irology Indicators:	ne is requ	uired: check all that	annly)				
Depth (indexe) Remarks:  YDROLOG Vetland Hyde Primary Indica	GY Irology Indicators: ators (minimum of c	ne is requ			nves (RQ		Seconda	ry Indicators (minimum of two rec
Depth (ind Remarks: YDROLOG Vetland Hyd Primary Indica Surface V	GY  Irology Indicators: ators (minimum of c	ne is requ	Water-Sta	ined Lea	` '		Seconda Surf:	ry Indicators (minimum of two recace Soil Cracks (B6)
Depth (incomplete property)  YDROLOGY  Vetland Hyde  Primary Indication  Surface V  X High Wat	GY Irology Indicators: ators (minimum of control of the control of	ne is requ	Water-Sta Aquatic Fa	ined Lea auna (B1	3)		Seconda Surfi Draii	ry Indicators (minimum of two rec ace Soil Cracks (B6) nage Patterns (B10)
Primary Indicates Surface V X High Wat X Saturation	GY  Irology Indicators: ators (minimum of control of the control o	ne is requ	Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 atic Plant	3) s (B14)		Seconda Surf: Drain Dry-	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Primary Indicates  YDROLOG  Vetland Hyde  Surface V  X High Wat  X Saturation  Water Ma	GY  Irology Indicators: ators (minimum of control Vater (A1) er Table (A2) in (A3) arks (B1)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (	3) s (B14) Odor (C1	)	SecondaSurfiDraiiDryCray	ry Indicators (minimum of two rec ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Primary Indicates  YDROLOG  Vetland Hyd  Primary Indicates  Surface V  X High Wat  X Saturation  Water Mat  Sediment	GY Irology Indicators: ators (minimum of control Vater (A1) er Table (A2) en (A3) arks (B1) c Deposits (B2)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1 eres on l	) Living Ro	Surfa Surfa Drain Cray Cray poots (C3)Satu	ry Indicators (minimum of two recact ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (
Popth (incomplete project project)  Popth (incomplete project	GY  Irology Indicators: ators (minimum of context) Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) in Deposits (B3)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1 eres on l	) Living Ro (C4)	SecondaSurfaDrainCrayCraySatuSturn	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1)
YDROLOG Vetland Hyd Primary Indica Surface V X High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat	GY  Irology Indicators: ators (minimum of control of co	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1 eres on led Iron etion in Ti	) Living Ro (C4)	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2)
Primary Indicates  YDROLOG  Vetland Hyde  Surface V  X High Wat  X Saturation  Water Mat  Sediment  Drift Depot  Algal Mat  Iron Depot	rology Indicators: ators (minimum of coverage) ators (A1) er Table (A2) n (A3) arks (B1) c Deposits (B2) posits (B3) or Crust (B4) posits (B5)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface	3) S (B14) Odor (C1 eres on lead Iron etion in Ties (C7)	) Living Ro (C4)	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1)
Primary Indicates  YDROLOG  Vetland Hyde  Surface V  X High Wate  X Saturation  Water Mater Mater  Sediment  Drift Deport  Algal Mater  Iron Deport  Inundation	GY  Irology Indicators: ators (minimum of control of co	magery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on letion in Ties (C7) a (D9)	) Living Ro (C4) Iled Soil	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2)
Primary Indication  YDROLOG  Vetland Hyd  Primary Indication  Surface V  X High Water Mater Mate	GY  Irology Indicators: ators (minimum of content of the content o	magery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on letion in Ties (C7) a (D9)	) Living Ro (C4) Iled Soil	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2)
Primary Indicates  X High Wate X Saturation Water Mate Sediment Drift Depote Algal Mate Iron Depote Inundation	GY  Irology Indicators: ators (minimum of control of co	magery (B Surface (	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on led Iron (ced Iron (ced Iron)) eres (C7) a (D9) Remarks)	) Living Ro (C4) Iled Soil	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2)
Primary Indication  YDROLOG  Wetland Hyde  Primary Indication  Surface V  X High Water Mater Mat	GY  Irology Indicators: ators (minimum of content (A1) er Table (A2) in (A3) arks (B1) is Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Invegetated Concave fations: ar Present? Ye	magery (B Surface ( s	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat Dlain in F	3) s (B14) Ddor (C1 eres on led Iron ettion in Tie e (C7) a (D9) Remarks)	) Living Ro (C4) Iled Soil	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2)
Primary Indicates  YDROLOG  Vetland Hyde  Primary Indicates  Surface V  X High Water Mater	GY  Irology Indicators: ators (minimum of content of co	magery (B Surface ( s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat blain in F	3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9) Remarks) nches):nches):	) Living Ro (C4) Iled Soil	Seconda   Surfi   Drain   Dry-   Cray   Satu   Sturn   S (C6)   X Geo	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Primary Indicates Surface VX High Water Mater Ma	GY  Irology Indicators: ators (minimum of content of co	magery (B Surface ( s  s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc on Surface Well Dat Depth (i Depth (i	3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9) Remarks) nches):nches):	) Living Ro (C4) Illed Soil	Seconda	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Popth (indexed)  Popth	GY  Irology Indicators: ators (minimum of content of co	magery (B Surface ( s s X s X	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i	3) s (B14) Ddor (C1 eres on led Iron ettion in Tile (C7) a (D9) Remarks) nches): _ nches): _ nches): _	) Living Ro (C4) Iled Soil	Seconda	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Popth (incomplete property)  Popth (incomplet	GY  Irology Indicators: ators (minimum of or vater (A1) er Table (A2) in (A3) arks (B1) is Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial II vegetated Concave vations: ar Present? Yee esent? Yee esent? Yee esent? Yee esent? Yee	magery (B Surface ( s s X s X	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i	3) s (B14) Ddor (C1 eres on led Iron ettion in Tile (C7) a (D9) Remarks) nches): _ nches): _ nches): _	) Living Ro (C4) Iled Soil	Seconda	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Popth (incomplete property)  Popth (incomplet	GY  Irology Indicators: ators (minimum of or vater (A1) er Table (A2) in (A3) arks (B1) is Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial II vegetated Concave vations: ar Present? Yee esent? Yee esent? Yee esent? Yee esent? Yee	magery (B Surface ( s s X s X gauge, m	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No No No	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i	3) s (B14) Ddor (C1 eres on led Iron ettion in Tile (C7) a (D9) Remarks) nches): _ nches): _ nches): _	) Living Ro (C4) Iled Soil	Seconda	ry Indicators (minimum of two recace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property	City/County: T Perry	/ Dane Co	Sampling Date: 5/7/2021
Applicant/Owner: Brett Krueger		State: WI	Sampling Point: P2
Investigator(s): Scott Fuchs, Heartland Ecological Group	Section, Township, Ra	ange: <u>T5N, R6E, S34</u>	
Landform (hillside, terrace, etc.): Gentle sideslope	Local relief (	concave, convex, none):	None/Linear
Slope (%): 1 - 3 Lat:	Long:	]	Datum:
Soil Map Unit Name: Huntsville silt loam (HuA)		NWI classifi	ication: N/A
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes	No X (If no, exp	lain in Remarks.)
Are Vegetation, Soil, or Hydrologysignific	cantly disturbed? Are "Normal (	Circumstances" present?	Yes X No
Are Vegetation, Soil, or Hydrologynatural		xplain any answers in Ren	marks.)
SUMMARY OF FINDINGS – Attach site map sh		ocations, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled A	rea	
Hydric Soil Present? Yes No X			No X
Wetland Hydrology Present? Yes No X	<u>-</u>		
Remarks:			
A WETS analysis was performed and indicates that condition west of the old stream meander.	ons are in the drier than normal ra	ange. Sample point recor	ded within a pasture ~30 feet
<b>VEGETATION</b> – Use scientific names of plants.			
	solute Dominant Indicator Cover Species? Status	Dominance Test wor	ksheet
1.	OVOI OPOSIOS. State	Number of Dominant S	
2.		Are OBL, FACW, or FA	
1 3		Total Number of Domi	nant Species
4		Across All Strata:	(B)
5	-T-tal Cavar	Percent of Dominant S	•
Sapling/Shrub Stratum (Plot size: 15ft )	=Total Cover	Are OBL, FACW, or FA	AC: 50.0% (A/B)
1.		Prevalence Index wo	rksheet:
2.		Total % Cover of:	
3.		OBL species 0	x 1 =0
4		FACW species 0	
5		FAC species 25	
	=Total Cover	FACU species 95 UPL species 0	
Herb Stratum (Plot size: 5ft )  1. Lolium perenne	90 Yes FACU	UPL species 0 Column Totals: 120	
	25 Yes FAC	Prevalence Index =	`` /`` /
	5 No FACU	1 10001000	3
4.	<u> </u>	Hydrophytic Vegetati	ion Indicators:
5.			Hydrophytic Vegetation
6.		2 - Dominance Te	est is >50%
7		3 - Prevalence Ind	
8			Adaptations <sup>1</sup> (Provide supporting
9.			s or on a separate sheet)
10	T 1 1 0	<del></del>	ophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30ft )	=Total Cover	<sup>1</sup> Indicators of hydric so be present, unless dist	oil and wetland hydrology must turbed or problematic.
1.		Hydrophytic	
2.		Vegetation	
<u> </u>	=Total Cover	Present? Yes_	No <u>X</u>
Remarks: (Include photo numbers here or on a separate sh			
Pasture vegetation present. Landowner says that this area s	sometimes used for pasture.		

SOIL Sampling Point: P2

			ator or o	confirm the absenc	e of indicators	5.)				
Depth	Matrix			Featur		. 2		5		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	_	Remarks	
0 - 6	10YR 2/1	100					Loamy/Clayey		SiL	
6 - 18	10YR 2/2	100					Loamy/Clayey		SiL	
18 - 24	10YR 2/2	10YR 3/6	5	C	M	Loamy/Clayey		SiL		
			_							
<sup>1</sup> Type: C=Co	oncentration, D=Dep	etion, RM=	Reduced Matrix, M	IS=Mas	ked Sand	d Grains	s. <sup>2</sup> Locatio	on: PL=Pore Li	ining, M=Matı	ix.
Hydric Soil	ndicators:							ors for Proble		
Histosol	(A1)		Sandy Gley	∕ed Mat	rix (S4)		Co:	ast Prairie Red	ox (A16)	
Histic Ep	ipedon (A2)		Sandy Red	ox (S5)			Iron	n-Manganese N	/lasses (F12)	
Black His	` '		Stripped Ma	•	3)			d Parent Materi	,	
	n Sulfide (A4)		Dark Surfac	. ,				ry Shallow Dark	•	2)
	Layers (A5)		Loamy Muc	-			Oth	ner (Explain in F	Remarks)	
2 cm Mu	,	(444)	Loamy Gle							
	Below Dark Surface rk Surface (A12)	(A11)	Depleted M  Redox Darl				<sup>3</sup> Indicat	ors of hydrophy	rtic vogotatio	o and
	ucky Mineral (S1)		Depleted D		, ,			tland hydrology	_	
	cky Peat or Peat (S3	)	Redox Dep					ess disturbed o		
	_ayer (if observed):	,	_ <del></del>						<u>'</u>	
Type:	-uyo. ( 0200.10u).									
Depth (ir	iches):		<u> </u>				Hydric Soil Prese	nt?	Yes	No X
Remarks:										
	il indicators observed	l.								
HYDROLO	GY									
_	drology Indicators:									
	cators (minimum of o	ne is requir			(50)			lary Indicators (	•	two required)
	Water (A1) ter Table (A2)		Water-Stair		, ,			rface Soil Cracl ainage Patterns	` '	
Saturatio	, ,		Aquatic Far		-			anage Fallerns /-Season Wate		
	arks (B1)		Hydrogen S		, ,	)		ayfish Burrows	, ,	
	t Deposits (B2)		Oxidized R		•			turation Visible	` '	gery (C9)
	osits (B3)		Presence of			-	· · · · · · · · · · · · · · · · · · ·	inted or Stresse		
Algal Ma	t or Crust (B4)		Recent Iror	Reduc	tion in Ti	lled Soil	Is (C6) Ge	omorphic Posit	ion (D2)	
Iron Dep	osits (B5)		Thin Muck	Surface	e (C7)		FA	C-Neutral Test	(D5)	
	on Visible on Aerial Ir		<i></i>							
Sparsely	Vegetated Concave	Surface (B	88)Other (Exp	ain in F	Remarks)					
Field Obser										
Surface Wat		s			nches):					
Water Table		s			nches):	-04	Marklan al III del na I	D 40	V	N. V
Saturation Pi		s <u>X</u>	No	Jepin (I	nches):	∠4	Wetland Hydrol	ogy Present?	Yes	No X
,	corded Data (stream	gauge mo	nitoring well aerial	photos	previou	s insper	tions) if available			
2000,100 110	cs. sou bata (ottodili	34490, 1110		P110100	, providu	opoc	, ii avaliabio.			
Remarks:										
No wetland h	ydrology indicators o	bserved.								

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property		City/Cou	ınty: T Perry	/ Dane Co	Sampling D	ate: <u>5/7/2</u>	2021
Applicant/Owner: Brett Krueger		<u> </u>		State: WI	Sampling P	oint:	P3
Investigator(s): Scott Fuchs, Heartland Ecological Group		Section,	Township, Ra	nge: T5N, R6E, S34	<del></del>		
Landform (hillside, terrace, etc.): Stream terrace				concave, convex, none			
Slope (%): 3 - 5 Lat:					•		
Soil Map Unit Name: Huntsville silt loam (HuA)		<u> </u>			ssification: N/A		
Are climatic / hydrologic conditions on the site typical for t	this time of v	ear?	Yes			·ke \	
Are Vegetation, Soil, or Hydrologysign	-						
							_
Are Vegetation, Soil, or Hydrologynat							
SUMMARY OF FINDINGS – Attach site map	showing	samplir	ng point io	cations, transec	ts, importan	t features	s, etc.
Hydrophytic Vegetation Present? Yes No _	<u>X</u>	Is the	e Sampled Ar	rea			
Hydric Soil Present? Yes X No		withi	n a Wetland?	? Yes	No X	-	
Wetland Hydrology Present? Yes No	X						
Remarks:							
A WETS analysis was performed and indicates that conc west of the stream channel.	ditions are in	ı the drier t	han normal ra	ange. Sample point re	corded on strear	m terrace ∼′	10 feet
<b>VEGETATION</b> – Use scientific names of plants		Dominant	Indicator				
		Species?	Status	Dominance Test w	vorksheet:		
1.				Number of Domina	nt Species That		
2.				Are OBL, FACW, o	•	1	(A)
3				Total Number of Do	ominant Species		
4				Across All Strata:		3	_(B)
5				Percent of Dominar	•		
- (Distance 15th	=Te	otal Cover		Are OBL, FACW, o	r FAC:	33.3%	_(A/B)
Sapling/Shrub Stratum (Plot size: 15ft )				Prevalence Index	aukahaati		
1				Total % Cover		ultiply by:	
3.				OBL species	0 x 1 =	ultiply by: 0	_
4.				FACW species	0 x1=	0	_
5.				FAC species	20 x 3 =	60	_
· -	=T	otal Cover		FACU species	83 x 4 =	332	_
Herb Stratum (Plot size: 5ft )				UPL species	0 x 5 =	0	_
Glechoma hederacea	50	Yes	FACU	Column Totals:	103 (A)	392	(B)
2. Lolium perenne	20	Yes	FACU	Prevalence Inde	x = B/A =	3.81	_
3. Poa pratensis	20	Yes	FAC				
4. Trifolium pratense	10	No	FACU	Hydrophytic Vege			
5. Taraxacum officinale	3	No	FACU		for Hydrophytic \	√egetation	
6				2 - Dominance			
7				3 - Prevalence		(Descride on	ina
8					cal Adaptations <sup>1</sup> arks or on a sep		
9. 10.					/drophytic Veget		
10	103 =T	otal Cover		<del></del>			,
<u>Woody Vine Stratum</u> (Plot size: 30ft )	100	otal Cove.		<sup>1</sup> Indicators of hydric be present, unless			must
1.				•	aid:a: 22	JIC	
2.				Hydrophytic Vegetation			
	=T	otal Cover			esNo	X	
Remarks: (Include photo numbers here or on a separate	e sheet.)						
Upland pasture grasses/vegetation.	,						

SOIL Sampling Point: P3

Profile Desc	ription: (Describe	to the dept	h needed to doc	ument tl	he indica	ator or	confirm the absence	of indicators.)		
Depth	Matrix		Redo	x Featur						
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rem	narks	
0 - 10	10YR 2/1	92	10YR 3/6	8	С	M	Loamy/Clayey	S	iL	
10 -18	10YR 2/1	92	10YR 3/6	8	С	M	Loamy/Clayey	Sic	CL	
18 - 24	10YR 2/1	90	10YR 3/6	_ 5	С	M	Loamy/Clayey	SiC (w/20	)% gravel)	
			10YR 4/6	5	С	M				
			_							
1T 0-0	tustian D-Dan		Dadward Matrix N				21 4:	DI -Dava Lining M		
Hydric Soil	oncentration, D=Dep	etion, Rivi-	Reduced Matrix, i	vio-ivias	keu Sand	Giains		: PL=Pore Lining, M		
Histosol			Sandy Gle	wed Mat	riv (S1)			st Prairie Redox (A16	-	
	ipedon (A2)		Sandy Red					Manganese Masses	-	
Black His		Stripped M	, ,				Parent Material (F21			
	n Sulfide (A4)		Dark Surfa	•	3)			Shallow Dark Surface	•	
	Layers (A5)		Loamy Mu	` '	eral (F1)			r (Explain in Remark	` '	
2 cm Mu			Loamy Gle	•	` '		<del></del> -	<b>\</b> 1	,	
	Below Dark Surface	e (A11)	Depleted N	-						
	rk Surface (A12)	, ,	X Redox Da	-	-		<sup>3</sup> Indicator	rs of hydrophytic veg	etation and	
Sandy M	ucky Mineral (S1)		Depleted [	Dark Sur	face (F7)		wetla	and hydrology must b	e present,	
5 cm Mu	cky Peat or Peat (S3	3)	Redox De	pression	s (F8)		unles	ss disturbed or proble	ematic.	
Restrictive I	_ayer (if observed):									
Type:										
Depth (ir	nches):		<u></u>				Hydric Soil Present	t? Yes	X No_	
Remarks:										
<u></u>										
HYDROLO	GY									
Wetland Hyd	drology Indicators:									
	cators (minimum of c	ne is requir						ry Indicators (minimu	ım of two requi	ired)
	Water (A1)		Water-Sta		` ,			ace Soil Cracks (B6)		
	ter Table (A2)		Aquatic Fa		-			nage Patterns (B10)	(00)	
Saturatio	` '		True Aqua		` ,			Season Water Table	(C2)	
	arks (B1)		Hydrogen		` '		<del></del> '	fish Burrows (C8)	ial Imagan, (CC	٥١
	t Deposits (B2) osits (B3)		Oxidized F Presence			-	` ' <del></del>	ration Visible on Aeri ted or Stressed Plan		1)
	t or Crust (B4)		Recent Iro		`	,		norphic Position (D2		
	osits (B5)		Thin Muck			iica coi	` ′ —	-Neutral Test (D5)	,	
	on Visible on Aerial I	magery (B7								
	Vegetated Concave									
Field Obser		•	<u> </u>							
Surface Wat		s	No X	Depth (i	nches):					
Water Table		s X		Depth (i	· -	20				
Saturation P		s X		Depth (i	_	18	Wetland Hydrolog	gy Present? Yes	No	X
(includes cap	oillary fringe)									
Describe Re	corded Data (stream	gauge, mo	nitoring well, aeria	l photos	, previous	s insped	ctions), if available:			
Remarks:										

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property		City/Cou	ınty: T Perry	/ Dane Co	Sampling Date:	5/7/2021	
Applicant/Owner: Brett Krueger				State: WI	Sampling Point	: P4	
Investigator(s): Scott Fuchs, Heartland Ecological Group	,	Section,	_ Township, Ra	nge: T5N, R6E, S34			
Landform (hillside, terrace, etc.): Stream terrace			Local relief (c	oncave, convex, none):	Concave		
Slope (%): <u>3 - 5</u> Lat:		Long:			Datum:		
Soil Map Unit Name: Huntsville silt loam (HuA)					fication: N/A		_
Are climatic / hydrologic conditions on the site typical for	this time of	year?	Yes	No X (If no, exp	plain in Remarks.)		_
Are Vegetation, Soil, or Hydrologysig	gnificantly d	isturbed? /	Are "Normal C	Circumstances" present?	Yes_X_ 1	No	
Are Vegetation, Soil, or Hydrologyna			(If needed, ex	plain any answers in Re	marks.)		
SUMMARY OF FINDINGS – Attach site map			ng point lo	cations, transects	, important fe	atures, etc	<b>)</b> .
Wetland Hydrology Present? Yes X No			e Sampled Ar in a Wetland?		. No		
Remarks:  A WETS analysis was performed and indicates that cor  Wetland area consits of a small area adjacent to the str			han normal ra	ange. Sample point reco	rded on a stream	terrace.	
<b>VEGETATION</b> – Use scientific names of plan							
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rkehoot.		
1	70 0000.	Ороског.		Number of Dominant Are OBL, FACW, or F	Species That	2 (A)	
3.				Total Number of Dom		(' ')	ļ
4.				Across All Strata:		2 (B)	
5				Percent of Dominant	•		
Sapling/Shrub Stratum (Plot size: 15ft )	=	Total Cover		Are OBL, FACW, or F	FAC: 1	00.0% (A/B	•)
1				Prevalence Index wo			_
2				Total % Cover of		•	
3				OBL species 4		40	
4					0 x 2 = 5 x 3 =	120 15	
o		Total Cover			3 x 4 =	12	
Herb Stratum (Plot size: 5ft )		10.01 00.2.			5 x 5 =	25	
1. Carex stipata	40	Yes	OBL		13 (A)	212 (B)	
Carex vulpinoidea	40	Yes	FACW	Prevalence Index	= B/A = 1.8		
3. Phalaris arundinacea	20	No	FACW				
4. Pastinaca sativa	5	No	UPL	Hydrophytic Vegetat			
5. Poa pratensis	5	No	FAC		r Hydrophytic Veg	etation	
6. Glechoma hederacea	3	No	FACU	X 2 - Dominance Te			
7. 8.				X 3 - Prevalence In	dex is ≤3.01 I Adaptations¹ (Pro	ovido eunnortii	חמ
					ks or on a separat		ΙI
10.					rophytic Vegetation		
	113 =	Total Cover		<sup>1</sup> Indicators of hydric s		, , ,	
Woody Vine Stratum (Plot size: 30ft )				be present, unless dis			
1	_			Hydrophytic			
2				Vegetation			
	=======================================	Total Cover		Present? Yes	X No		
Remarks: (Include photo numbers here or on a separate Sedge meadow vegetation present adjacent to the cree	,						

**SOIL** Sampling Point: P4

epth	Matrix		Redo		<b>-</b> 1	. 2	_				
nches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur		Re	emarks	
0 - 6	10YR 2/1	100					Loamy/Cl	ayey		SiL	
6 - 18	10YR 2/1	90	10YR 3/6	10	<u>C</u>	<u>M</u>	Loamy/Cl	ayey		SiL	
					<u> </u>						
	5.5						2				
/pe: C=Cor /dric Soil In		letion, Riv	I=Reduced Matrix, N	vi5=iviasi	ked San	d Grains			L=Pore Lining, or Problemation		lc <sup>3</sup> .
Histosol (A			Sandy Gle	wed Mat	riv (S4)		1!		rairie Redox (A	-	15 .
	pedon (A2)		Sandy Red	-	IIX (34)		-		nganese Masse	-	
Black Hist			Stripped M		:1		_		ent Material (F		
_			<del></del> ···	`	"		_		•	,	
_ · ·	Sulfide (A4)		Dark Surfa	` '	oral (E1)		_		allow Dark Sur xplain in Rema		
_Stratified i 2 cm Muc	Layers (A5)		Loamy Mu	-			_	Other (E	Apiaiii iii Kema	1142)	
_	,	. (	Loamy Gle	-							
_ '	Below Dark Surface	(A11)	Depleted N				3	Indiant	f budnorbudir		4
_	k Surface (A12)		X Redox Da		, ,	١	J		f hydrophytic v	•	
_ ′	icky Mineral (S1)	)\		Depleted Dark Surface (F7)  Redox Depressions (F8)				wetland hydrology must be present, unless disturbed or problematic.			
	ky Peat or Peat (S3	-	Kedox Del	pressions	s (۲ŏ)	Г		uniess d	isturbed or pro	DIEITIALIC.	
	ayer (if observed):										
Type:											
	Grave							_			
Depth (inc		18	ock/gravel.				Hydric Soil	Present?	Υє	es <u>X</u> M	No_
Depth (inc emarks: ould not sam	ches):  nple below 18 inche	18	ock/gravel.				Hydric Soil	Present?	Ye	es <u>X</u> N	No_
Depth (incomercial contents)  Output  Depth (incomercial contents)  Depth (incomercial contents)	ches):  nple below 18 inche	18	ock/gravel.				Hydric Soil	Present?	Ye	es <u>X</u> M	No_
Depth (incomercial could not same of the cou	ches):  Inple below 18 inche  GY  rology Indicators:	18 s due to r	ock/gravel.	apply)					Ye		
Depth (incomments: bould not same	ches):  pple below 18 inches  GY  rology Indicators: ators (minimum of comments)	18 s due to r			ves (B9			Secondary Ir		mum of two r	
Depth (incomments)  Depth (incomments)  Depth (incomments)  DROLOG  Detland Hydical  Surface W	ches):  pple below 18 inches  GY  rology Indicators: ators (minimum of comments)	18 s due to r	uired; check all that Water-Sta	ined Lea	` '			Secondary II	ndicators (minin Soil Cracks (B	mum of two r	
Depth (incommerks: puld not same puld not sa	ators (Minimum of of Vater (A1) er Table (A2)	18 s due to r	uired; check all that Water-Sta Aquatic Fa	ined Lea auna (B1	3)	)		Secondary II Surface Drainage	ndicators (minii Soil Cracks (B10 e Patterns (B10	mum of two r 6)	
Depth (incommerks: pould not same po	ators (minimum of over Table (A2) in (A3)	18 s due to r	uired; check all that Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 atic Plant	3) s (B14)			Secondary II Surface Drainage Dry-Sea	ndicators (minin Soil Cracks (B e Patterns (B10 son Water Tab	mum of two r 6)	
Depth (incommerks: pould not same po	ators (minimum of over Table (A2) in (A3)	18 s due to r	uired; check all that Water-Sta Aquatic Fa	ined Lea auna (B1 atic Plant Sulfide (	3) s (B14) Odor (C1	)	<u>S</u>	Secondary II Surface Drainage Dry-Sea Crayfish	ndicators (minii Soil Cracks (B10 e Patterns (B10	mum of two r 6) 0) le (C2)	equ
Depth (incommerks: build not same pould not same po	ches):  Inple below 18 inches  Inple below 18 inches  Inple below 18 inches  Inple below 18 inches  In	18 s due to r	uired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1 eres on	) Living Re	<u>S</u>	Secondary Ir Surface Drainage Dry-Sea Crayfish Saturatio	ndicators (minii Soil Cracks (B e Patterns (B10 son Water Tab Burrows (C8)	mum of two r 6) )) le (C2) erial Imagery	equ
Depth (incommerce)  Proposed in the control of the	arches):  Imple below 18 inches  Imple below	18 s due to r	uired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1 eres on ced Iron	) Living Ro (C4)		Secondary Ir Surface Drainage Dry-Sea Crayfish Saturatie Stunted	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Tab Burrows (C8) on Visible on A or Stressed Pla	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incommerce)  POROLOGY  Petland Hydromary Indicate  Surface Work High Water  Commerce Saturation  Water Mater Mate	rology Indicators: ators (minimum of ovater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)	18 s due to r	uired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1 eres on ced Iron tion in T	) Living Ro (C4)	oots (C3)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Bile Patterns (B10 Burrows (C8) on Visible on A or Stressed Plaphic Position (I	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incommerks: build not same depth of the control of the cont	ches):  Inple below 18 inches  Inple below 18 inches  Inple below 18 inches  Inple below 18 inches  In	18 s due to r	uired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  Presence	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1 eres on ced Iron tion in T (C7)	) Living Ro (C4)	oots (C3)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Tab Burrows (C8) on Visible on A or Stressed Pla	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incomarks: build not same point of the point of th	rology Indicators: ators (minimum of ovater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)	as due to rome is requested.	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  To Gauge or N	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9)	) Living Ro (C4) illed Soil	oots (C3)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Bile Patterns (B10 Burrows (C8) on Visible on A or Stressed Plaphic Position (I	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incommerce)  Proposed in the control of the	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) sits (B5) n Visible on Aerial I	as due to rome is requested.	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  To Gauge or N	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9)	) Living Ro (C4) illed Soil	oots (C3)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Bile Patterns (B10 Burrows (C8) on Visible on A or Stressed Plaphic Position (I	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incommerce)  POROLOGY  Portland Hydromary Indication  Water Mater	rology Indicators: ators (minimum of of vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I Vegetated Concave	ne is requested and the second	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  Thin Muck  Gauge or V  State  Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat Datin in R	s (B14) Ddor (C1 eres on ted Iron tion in T (C7) a (D9)	) Living Ro (C4) illed Soil	oots (C3)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Bile Patterns (B10 Burrows (C8) on Visible on A or Stressed Plaphic Position (I	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incommerce) Proposed in the control of the c	ches):  Imple below 18 inches  Imple below 18	s due to requested and the second sec	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  To Gauge or V  (B8)  Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on ced Iron tion in T (C7) a (D9) emarks)	) Living Ro (C4) illed Soil	oots (C3)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Bile Patterns (B10 Burrows (C8) on Visible on A or Stressed Plaphic Position (I	mum of two r 6) 0) le (C2) erial Imagery ants (D1)	equ
Depth (incommerce) POROLOG  Portland Hydromary Indicate Surface Water Mater Table Foundation	ches):  ches):  ches):  ches):  ches):  ches is a consequence of the c	ne is requested from the second secon	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  70  Gauge or V  B8)  Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc s Surface Well Dat Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9) emarks) nches):	) Living Re (C4) illed Soil	oots (C3) s (C6)	Secondary II Surface Drainage Dry-Sea Crayfish Saturatic Stunted X Geomor X FAC-Ne	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Taber Burrows (C8) on Visible on A or Stressed Plaphic Position (Intral Test (D5)	mum of two r 6) 0) lle (C2) erial Imagery ants (D1) D2)	equ
Depth (incommarks: ould not same pould not pould no	ches):  ches):  ches):  ches):  ches):  ches is ches in the ches i	magery (B Surface (	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  70  Gauge or V  B8)  Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9) emarks) nches):	) Living Re (C4) illed Soil	oots (C3) s (C6)	Secondary II Surface Drainage Dry-Sea Crayfish Saturate Stunted X Geomor	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Taber Burrows (C8) on Visible on A or Stressed Plaphic Position (Intral Test (D5)	mum of two r 6) 0) lle (C2) erial Imagery ants (D1) D2)	equ
Depth (incommerce)  PROLOC  Petland Hydromary Indication  Surface Water Mater Table Featuration Prescuedes capi	ches):  Imple below 18 inches  Imple below 18	magery (B Surface (	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  70  Gauge or V  B8)  Other (Exp	ined Lea auna (B1 auna (B1 Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat Delain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on ced Iron tion in T (C7) a (D9) demarks; nches): nches):	) Living Ro (C4) illed Soil	oots (C3)	Secondary In Surface Drainage Dry-Sea Crayfish Saturatic Stunted X Geomor X FAC-Ne	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Taber Burrows (C8) on Visible on A or Stressed Plaphic Position (Intral Test (D5)	mum of two r 6) 0) lle (C2) erial Imagery ants (D1) D2)	equ
Depth (incomments)  Proposition of the proposition	ches):  Imple below 18 inches  Imple below 18	magery (B Surface (	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  To Gauge or No  Water-Sta	ined Lea auna (B1 auna (B1 Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat Delain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on ced Iron tion in T (C7) a (D9) demarks; nches): nches):	) Living Ro (C4) illed Soil	oots (C3)	Secondary In Surface Drainage Dry-Sea Crayfish Saturatic Stunted X Geomor X FAC-Ne	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Taber Burrows (C8) on Visible on A or Stressed Plaphic Position (Intral Test (D5)	mum of two r 6) 0) lle (C2) erial Imagery ants (D1) D2)	equ
Depth (incomments)  Proposition of the proposition	ches):  Imple below 18 inches  Imple below 18	magery (B Surface (	wired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  To Gauge or No  Water-Sta	ined Lea auna (B1 auna (B1 Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat Delain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on ced Iron tion in T (C7) a (D9) demarks; nches): nches):	) Living Ro (C4) illed Soil	oots (C3)	Secondary In Surface Drainage Dry-Sea Crayfish Saturatic Stunted X Geomor X FAC-Ne	ndicators (mining Soil Cracks (Buse Patterns (B10 son Water Taber Burrows (C8) on Visible on A for Stressed Playinc Position (Intral Test (D5)	mum of two r 6) 0) lle (C2) erial Imagery ants (D1) D2)	equ

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property		City/Cou	ınty: T Perry	/ Dane Co	Sampling Date	5/7/2021	
Applicant/Owner: Brett Krueger				State: WI	Sampling Point	:: P5	
Investigator(s): Scott Fuchs, Heartland Ecological Group		Section,	Township, Ra	nge: T5N, R6E, S34			
Landform (hillside, terrace, etc.): Depression			Local relief (c	oncave, convex, none):	Concave		
Slope (%): 1 - 3 Lat:		Long:			Datum:		
Soil Map Unit Name: Huntsville silt loam (HuA)					ification: N/A		
Are climatic / hydrologic conditions on the site typical for	this time of	year?	Yes	No X (If no, ex	plain in Remarks.)	)	_
Are Vegetation, Soil, or Hydrologysig	nificantly d	isturbed? /	Are "Normal C	circumstances" present	? Yes X !	No	
Are Vegetation, Soil, or Hydrology_X_nat	turally prob	lematic? (	(If needed, ex	plain any answers in Re	emarks.)		
SUMMARY OF FINDINGS – Attach site map	showin	g samplir	ng point lo	cations, transects	s, important fe	atures, etc	с.
Wetland Hydrology Present? Yes X No			e Sampled Ar in a Wetland?		. No		
Remarks:  A WETS analysis was performed and indicates that condepression that is separated from the stream channel by	y a berm.	in the drier t	han normal ra	inge. Sample point reco	orded in a crescen	t-shaped	
VEGETATION – Use scientific names of plant							
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:		
1				Number of Dominant Are OBL, FACW, or F	Species That	3 (A)	
3. 4.				Total Number of Dom Across All Strata:		3 (B)	
5.				Percent of Dominant	Species That	, , .	ļ
Sapling/Shrub Stratum (Plot size: 15ft )	<u> </u>	Total Cover		Are OBL, FACW, or f	•	100.0% (A/E	3)
1				Prevalence Index w	orksheet:		
2				Total % Cover o			
3				· -	80 x 1 =	30	
4				' -	10 x 2 =	80	
5		Total Cover			28 x 3 = 0 x 4 =	84 0	
<u> </u>		Total Cove.			3 x5=	15	
1. Carex vulpinoidea	30	Yes	FACW		01 (A)	209 (B)	
2. Carex stipata	30	Yes	OBL	Prevalence Index	= B/A = 2.0		
3. Poa pratensis	25	Yes	FAC				
4. Phalaris arundinacea	10	No	FACW	Hydrophytic Vegeta	tion Indicators:		_
5. Pastinaca sativa	3	No	UPL		r Hydrophytic Veg	etation	
6. Rumex crispus	3	No	FAC	X 2 - Dominance To			
7				X 3 - Prevalence In		tele encommenda	
8					l Adaptations <sup>1</sup> (Pro ks or on a separat	• • • •	ng
9					rophytic Vegetatio		
10	101 =	Total Cover		<sup>1</sup> Indicators of hydric s	. ,	` ' '	
<u> </u>		10.0.		be present, unless dis			Ĺ
1				Hydrophytic		<del>,</del>	
2.				Vegetation			
<u>-</u>	=	Total Cover		_	X No		
Remarks: (Include photo numbers here or on a separate Wetland sedges dominating within the depression.	e sheet.)						

**SOIL** Sampling Point: P5

Depth	Matrix			x Feature		. 1				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 14	10YR 2/1	95	10YR 3/6	5	С	M	Loamy/Clayey	SiL		
14 - 22	10YR 3/1	90	10YR 3/6	10	С	M	Loamy/Clayey	SiL		
							-			
							-	_		
								_		
								_		
							-	_		
Type: C=Cc	ncentration, D=Depl	etion, RM=	=Reduced Matrix, N	/IS=Masl	ked Sand	d Grains	. <sup>2</sup> Locat	ion: PL=Pore Lining, M=Matrix.		
Hydric Soil I								tors for Problematic Hydric Soils	s³:	
Histosol (	•		Sandy Gle	-	rix (S4)			past Prairie Redox (A16)		
	ipedon (A2)		Sandy Red		• • •			on-Manganese Masses (F12)		
Black His	` '		Stripped M  Dark Surfa	`	))			ed Parent Material (F21) ery Shallow Dark Surface (F22)		
	Sulfide (A4)			` '	ral (E1)			•		
2 cm Mu	Layers (A5)		Loamy Mu Loamy Gle	-				her (Explain in Remarks)		
	Below Dark Surface	(Δ11)	Depleted N							
	rk Surface (A12)	(////)	X Redox Dar	•	•		<sup>3</sup> Indica	tors of hydrophytic vegetation and		
	ucky Mineral (S1)		Depleted D		` '			etland hydrology must be present,		
	cky Peat or Peat (S3)	)	Redox Dep		, ,		wetland hydrology must be present, unless disturbed or problematic.			
Restrictive L	.ayer (if observed):									
Type:										
Danth (in										
Depth (in	ches):						Hydric Soil Pres	ent? Yes X N	o	
Remarks:	ches):		<del>_</del>				Hydric Soil Preso	ent? Yes <u>X</u> N	<u> </u>	
	ches):						Hydric Soil Preso	ent? Yes <u>X</u> N	o	
							Hydric Soil Preso	ent? Yes <u>X</u> N	o	
Remarks:							Hydric Soil Preso	ent? Yes <u>X</u> N	o	
Remarks:  IYDROLO  Wetland Hyd	GY	ne is requi	red; check all that a	apply)			,	ent? Yes X N		
Remarks:  IYDROLO  Wetland Hyc  Primary Indic	GY Irology Indicators:	ne is requi	ired; check all that a		ves (B9)		Secon			
Remarks:  IYDROLO  Wetland Hyc  Primary Indic  Surface \( \)  High Wat	GY Irology Indicators: ators (minimum of or Water (A1) er Table (A2)	ne is requi	Water-Stai Aquatic Fa	ined Lea una (B1	3) ` ´		Secon Su Dr	dary Indicators (minimum of two re irface Soil Cracks (B6) ainage Patterns (B10)		
IYDROLO Wetland Hyc Primary Indic Surface V High Wat	GY Irology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3)	ne is requi	Water-Stai Aquatic Fa True Aqua	ined Lea una (B1 tic Plants	3) s (B14)		Scon Sc Dr Dr	dary Indicators (minimum of two re urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2)		
IYDROLO Wetland Hyc Primary Indic Surface V High Wat Saturatio Water Ma	GY Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) n (A3) arks (B1)	ne is requi	Water-Stai Aquatic Fa True Aqua Hydrogen	ined Lea una (B1: tic Plants Sulfide C	3) s (B14) Odor (C1)	)	Secon Su Dr Cr	dary Indicators (minimum of two re Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8)	equire	
IYDROLO Wetland Hyc Primary Indic Surface V High Wat Saturatio Water Ma	GY Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)	ne is requi	Water-Stai Aquatic Fa True Aqua Hydrogen 9 Oxidized R	ined Lea una (B1 tic Plants Sulfide C Rhizosph	3) s (B14) Odor (C1) eres on l	) ₋iving Ro	SeconSuDrCrCrSsoots (C3)Sa	dary Indicators (minimum of two re Irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery	equire	
IYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depo	GY Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	ne is requi	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc	3) s (B14) Odor (C1) eres on led	) Living Ro	Secon   St	dary Indicators (minimum of two re irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1)	equire	
IYDROLO Wetland Hyc Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depo	GY Irology Indicators: ators (minimum of or Vater (A1) ier Table (A2) in (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4)	ne is requi	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence o	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc	3) s (B14) Odor (C1) eres on I ced Iron (	) Living Ro	Secon	dary Indicators (minimum of two re urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) eomorphic Position (D2)	equire	
Netland Hyde Surface Water Ma Sediment Drift Depo	GY  Irology Indicators: ators (minimum of or		Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface	3) s (B14) Odor (C1) eres on led Iron (tion in Ti	) Living Ro	Secon	dary Indicators (minimum of two re irface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1)	equire	
IYDROLO Wetland Hyc Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depo	GY Irology Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aerial In	nagery (B7	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or N	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data	3) s (B14) Odor (C1) eres on L ed Iron ( tion in Ti (C7) a (D9)	) _iving Ro (C4) Iled Soil:	Secon	dary Indicators (minimum of two re urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) eomorphic Position (D2)	equire	
Nemarks:  IYDROLO  Wetland Hyde  Primary Indice  Surface Water Ma  Saturatio  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Inundatio  Sparsely	GY  Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) in Visible on Aerial In Vegetated Concave	nagery (B7	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or N	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data	3) s (B14) Odor (C1) eres on L ed Iron ( tion in Ti (C7) a (D9)	) _iving Ro (C4) Iled Soil:	Secon	dary Indicators (minimum of two re urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) eomorphic Position (D2)	equire	
Netland Hyden Surface Water Massediment Drift Depote Algal Matter Drift Depote Sparsely	GY  Irology Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) in Visible on Aerial In Vegetated Concave	nagery (B7 Surface (E	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or N Other (Exp	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data blain in R	3) s (B14) Ddor (C1) eres on I ed Iron ( tion in Ti (C7) a (D9) emarks)	) _iving Ro (C4) Iled Soil:	Secon	dary Indicators (minimum of two re urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) eomorphic Position (D2)	equire	
Remarks:  IYDROLO  Wetland Hyc  Primary Indic  Surface V  High Wat  Saturatio  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Inundatio  Sparsely  Field Observ  Surface Water	GY  Irology Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) in Visible on Aerial In Vegetated Concave vations: ark Present?	nagery (B7 Surface (E	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or N Other (Exp	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data blain in R	3) s (B14) Ddor (C1) eres on I ed Iron ( tion in Ti (C7) a (D9) emarks)	) _iving Ro (C4) Iled Soil:	Secon	dary Indicators (minimum of two re urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) eomorphic Position (D2)	equire	
Netland Hyden Surface Water Massediment Drift Depote Algal Matter Drift Depote Sparsely	GY  Irology Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) c or Crust (B4) posits (B5) in Visible on Aerial In Vegetated Concave vations: er Present? Yes Present? Yes	nagery (B7 Surface (E	Water-Stai	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data blain in R Depth (ir	3) s (B14) Odor (C1) eres on I eed Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _	) _iving Ro (C4) Iled Soil:	Secon   Su   Dr   Dr   Cr   St   St   St   St   FA	dary Indicators (minimum of two reurface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) ecomorphic Position (D2) AC-Neutral Test (D5)	(C9)	
Remarks:  IYDROLO  Wetland Hyc  Primary Indic  Surface V  High Wat  Saturatio  Water Ma  Sedimen:  Drift Depo  Algal Mat  Iron Depo  Inundatio  Sparsely  Field Observ  Surface Water  Water Table	GY Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) in Visible on Aerial In Vegetated Concave vations: er Present? Yes erent? Yes esent? Yes	nagery (B7 Surface (E	Water-Stai	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduc n Reduc Surface Well Data blain in R	3) s (B14) Odor (C1) eres on I eed Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _	) Living Ro (C4) Illed Soil:	Secon	dary Indicators (minimum of two reurface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) ecomorphic Position (D2) AC-Neutral Test (D5)	(C9)	
Remarks:  IYDROLO  Wetland Hyde  Primary Indice  Surface Water May  Saturatio  Water May  Sediment  Drift Depo  Algal Mater Inundation  Sparsely  Field Observe  Surface Water Table  Saturation Prediction of the companies of the	GY Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) in Visible on Aerial In Vegetated Concave vations: er Present? Yes erent? Yes esent? Yes	nagery (B7 Surface (E	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Gauge or V No X No X No X	ined Lea auna (B1: tic Plants Sulfide C Rhizosphi of Reduc n Reduc Surface Well Data blain in R Depth (in Depth (in	s (B14) Solution (C1) Solution in Ti (C7) Solu	) Living Ro (C4) Illed Soil:	Secon	dary Indicators (minimum of two reurface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) ecomorphic Position (D2) AC-Neutral Test (D5)	(C9)	
Remarks:  IYDROLO  Wetland Hyc  Primary Indic  Surface V  High Wat  Saturatio  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Inundatio  Sparsely  Field Observ  Surface Water  Water Table  Saturation Pr  (includes cap  Describe Rec	GY  Irology Indicators: ators (minimum of or Vater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) cosits (B3) t or Crust (B4) cosits (B5) in Visible on Aerial In Vegetated Concave vations: er Present? Yes ersent? Yes esent? Yes eillary fringe)	nagery (B7 Surface (E	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Gauge or V No X No X No X	ined Lea auna (B1: tic Plants Sulfide C Rhizosphi of Reduc n Reduc Surface Well Data blain in R Depth (in Depth (in	s (B14) Solution (C1) Solution in Ti (C7) Solu	) Living Ro (C4) Illed Soil:	Secon	dary Indicators (minimum of two reurface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) ecomorphic Position (D2) AC-Neutral Test (D5)	(C9)	
Remarks:  IYDROLO  Wetland Hyde  Primary Indice  Surface V  High Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Inundatio  Sparsely  Field Observ  Surface Water  Water Table  Saturation Pr  (includes cap  Describe Reco	GY  Irology Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) in Visible on Aerial In Vegetated Concave rations: are Present? Yes eresent? Yes esent? Yes esent? Yes esent? Yes esorded Data (stream of the stream	nagery (B7 Surface (E S S gauge, mo	Water-Stai Aquatic Fa True Aqua Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or N Other (Exp No X No X No Onitoring well, aeria	ined Lea auna (B1: tic Plants Sulfide C Rhizospho of Reduci n Reduci Surface Well Data blain in R Depth (ir Depth (ir Depth (ir	3) s (B14) Ddor (C1) eres on I eed Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ previous	) Living Ro (C4) Illed Soil:	Secon St Dr Cr Cr St St St S(C6) X Ge X FA  Wetland Hydro  tions), if available:	dary Indicators (minimum of two reurface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery unted or Stressed Plants (D1) ecomorphic Position (D2) AC-Neutral Test (D5)	(C9)	

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property	City/Cor	unty: T Perry / Da	ane Co	Sampling Date:	5/7/2021
Applicant/Owner: Brett Krueger			State: WI	Sampling Point:	P6
Investigator(s): Scott Fuchs, Heartland Ecological Group	Section,	Township, Range	e: T5N, R6E, S34		
Landform (hillside, terrace, etc.): Berm		Local relief (conc	cave, convex, none):	Convex	
Slope (%): 3 - 5 Lat:	Long:			Datum:	
Soil Map Unit Name: Hunstville silt loam (HuA)			_	fication: N/A	
Are climatic / hydrologic conditions on the site typical for t	this time of year?	Yes	No X (If no, exp	plain in Remarks.)	
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed?	Are "Normal Circu	umstances" present?	Yes X N	o
Are Vegetation, Soil, or Hydrologynati		(If needed, explai	in any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site map		ng point loca	tions, transects	s, important fea	atures, etc.
Hydrophytic Vegetation Present? Yes No	X Is th	e Sampled Area			
Hydric Soil Present? Yes No	X with	in a Wetland?	Yes	No X	
Wetland Hydrology Present? Yes No	X				
Remarks:					
A WETS analysis was performed and indicates that conc creek channel.	ditions are in the drier	than normal range	∍. Sample point reco	rded on a berm jus	t west of the
VEGETATION – Use scientific names of plants	S.				
	Absolute Dominant % Cover Species?		Dominance Test wo	rksheet:	
1	OCCO OPOCIOS.	· <del></del>	Sumber of Dominant		
2.			Are OBL, FACW, or F		0 (A)
3.		T	otal Number of Dom	inant Species	
4		A	Across All Strata:	<u> </u>	1 (B)
5			Percent of Dominant	•	(A/D)
	=Total Cover	ſ A	Are OBL, FACW, or F	-AC: <u>C</u>	0.0% (A/B)
Sapinig/Siliub Stiatuiii (Flot Size. 15it )		P	Prevalence Index wo	orksheet:	
2.			Total % Cover of		v bv:
3.		<del></del>		x 1 =	0
4.				x 2 =	0
5.		F	AC species 1	0 x 3 =	30
_	=Total Cover		ACU species 11		440
Herb Stratum (Plot size: 5ft )	V			5 x 5 =	25
1. Lolium perenne	80 Yes		Column Totals: 12	` ′	495 (B)
2. Trifolium pratense	15 No	FACU FAC	Prevalence Index	= B/A = 3.90	6
Poa pratensis     Taraxacum officinale	10 No No	FACU H	lydrophytic Vegetat	tion Indicators:	
5. Pastinaca sativa	5 No	UPL FACO		r Hydrophytic Vege	tation
6. Glechoma hederacea	5 No	FACU	2 - Dominance Te		tation
7.			3 - Prevalence Inc		
8.			4 - Morphological	I Adaptations <sup>1</sup> (Prov	vide supporting
9.		_		ks or on a separate	•
10		_	Problematic Hydr	rophytic Vegetation	¹ (Explain)
_	125 =Total Cover	'	Indicators of hydric s		
Woody Vine Stratum (Plot size: 30ft )		b	e present, unless dis	sturbed or problema	atic.
1			lydrophytic		
2	=Total Cover		/egetation Present? Yes	No. Y	
<del>-</del>		/ <u> </u>	resent: 165	No <u>X</u>	
Remarks: (Include photo numbers here or on a separate Pasture vegetation present on the berm.	∍ sheet.)				

SOIL Sampling Point: P6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth Matrix Redox Features												
(inches)	nches) Color (moist) %		Color (moist) % Type <sup>1</sup>			Loc <sup>2</sup>	Texture		Remarks			
0 - 20	10YR 2/2	100				Loamy/Clayey		SiL				
							-					
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=Re	educed Matrix,	MS=Mas	ked Sand	d Grains	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.					
Hydric Soil	ndicators:							Indicators for	or Problematic H	lydric Soils³:		
Histosol	(A1)		Sandy G	leyed Mat	rix (S4)		Coast Prairie Redox (A16)					
Histic Ep	ipedon (A2)		Sandy Re	edox (S5)				Iron-Mar	_Iron-Manganese Masses (F12)			
Black His	stic (A3)		Stripped	Matrix (S6	3)		Red Parent Material (F21)					
Hydroge	n Sulfide (A4)		Dark Sur	face (S7)			Very Shallow Dark Surface (F22)					
	Layers (A5)			lucky Mine			Other (Explain in Remarks)					
2 cm Mu	· ·			leyed Mat								
	Below Dark Surface	e (A11)		Matrix (F	,			2				
	rk Surface (A12)			ark Surfac	, ,		<sup>3</sup> Indicators of hydrophytic vegetation and					
	ucky Mineral (S1)			Dark Sur	, ,	)	wetland hydrology must be present,					
5 cm Mu	cky Peat or Peat (S3	5)	Redox De	epression	s (F8)		unless disturbed or problematic.					
Restrictive I	_ayer (if observed):											
Type:			_									
Depth (ir	nches):		_				Hydric Soil Present? Yes No X					
Remarks:												
HYDROLO	·CV											
_	drology Indicators:							0	P ( /			
	cators (minimum of o	ne is required			(DO)			-	ndicators (minimu	m of two requ	<u>lired)</u>	
	Water (A1)			ained Lea	` '				Soil Cracks (B6)			
	ter Table (A2)			auna (B1	•				e Patterns (B10)	(C2)		
Saturation (A3)True Aquatic Plants (B14)								son Water Table Burrows (C8)	(02)			
Water Marks (B1) Hydrogen Sulfide Odor (C1)							oots (C3)		on Visible on Aeri	al Imageny (C	۵)	
Sediment Deposits (B2)Oxidized Rhizospheres on Living Ro Drift Deposits (B3) Presence of Reduced Iron (C4)							0013 (00)		or Stressed Plant		J)	
	t or Crust (B4)			on Reduc			ls (C6)		phic Position (D2)			
							(00)		utral Test (D5)	•		
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Gauge or Well Data (D9)									aa. 1001 (20)			
Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)												
Field Obser				<u> </u>								
Surface Wat		s	No X	Depth (i	nches):							
Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):												
Saturation Present? Yes No X Depth (inches):						-   Wetland Hydrology Present? Yes No X						
(includes cap				( .	_			,	•			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
Remarks:												
No wetland h	ydrology indicators o	bserved.										

US Army Corps of Engineers Midwest Region – Version 2.0

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Krueger Property		City/Cou	nty: T Perry	/ Dane Co	Sampling Date: 5/7/202		2021
Applicant/Owner: Brett Krueger				State: WI	Sampling Poi	int:	P7
Investigator(s): Scott Fuchs, Heartland Ecological Group	ı	Section,	Гownship, Ra	nge: T5N, R6E, S34			
Landform (hillside, terrace, etc.): Terrace / Old Driving L	ane		Local relief (c	oncave, convex, none):	: None		
Slope (%): 1 - 3 Lat:		Long:			Datum:		
Soil Map Unit Name: Radford silt loam (RaA)					ification: N/A		
Are climatic / hydrologic conditions on the site typical for	this time o	f vear?	Yes	No X (If no, ex	-	s.)	
Are Vegetation , Soil , or Hydrology signature , signa				ircumstances" present			
Are Vegetation , Soil , or Hydrology na				plain any answers in Re			_
SUMMARY OF FINDINGS – Attach site ma				-	•	features	s, etc.
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled A	rea			
	X		n a Wetland		No_X		
Wetland Hydrology Present? Yes No	X						
Remarks:		•					
A WETS analysis was performed and indicates that col						old driving	lane
present on a steep sideslope. Obviously not a wetland		ocumentea at	ue to wettand	indicator soils mapped	in this location.		
VEGETATION – Use scientific names of plan							
<u>Tree Stratum</u> (Plot size: 30ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rkehoot:		
1. Ulmus americana	10	Yes	FACW	Number of Dominant			
2. Juglans nigra	10	Yes	FACU	Are OBL, FACW, or	•	3	(A)
3. Acer negundo	10	Yes	FAC	Total Number of Don	_		<b>-</b> ` ′
4.				Across All Strata:	· _	4	(B)
5				Percent of Dominant	Species That		
	30 =	Total Cover		Are OBL, FACW, or	FAC:	75.0%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 15ft )							
1				Prevalence Index w		Alia le cola con	
2. 3.				Total % Cover of OBL species	0 x1=	tiply by: 0	-
				-	10 x 2 =	20	_
5.				· -	35 x 3 =	255	_
		Total Cover		-	12 x 4 =	168	_
Herb Stratum (Plot size: 5ft )				UPL species	2 x 5 =	10	_
1. Poa pratensis	60	Yes	FAC	Column Totals: 1	39 (A)	453	(B)
2. Trifolium repens	15	No	FACU	Prevalence Index	= B/A =	3.26	_
3. Viola sororia	15	No	FAC		<del> </del>		
4. Erigeron annuus	10	No No	FACU	Hydrophytic Vegeta			
5. Taraxacum officinale 6. Arctium minus	<u>5</u>	No No	FACU FACU	1 - Rapid Test fo X 2 - Dominance T	, , ,	egetation	
7. Leonurus cardiaca	2	No	UPL	3 - Prevalence Ir			
8.				4 - Morphologica		Provide su	pporting
9.				data in Remar	ks or on a separ	rate sheet)	)
10.				Problematic Hyd	rophytic Vegetat	tion¹ (Expl	ain)
		<sup>1</sup> Indicators of hydric s	soil and wetland	hydrology	must		
Woody Vine Stratum (Plot size: 30ft )				be present, unless di	sturbed or proble	ematic.	
1				Hydrophytic			
2		Total Carra		Vegetation	V N-		
	· ·	Total Cover		Present? Yes	<u>X</u> No_		
Remarks: (Include photo numbers here or on a separa	te sheet.)						

US Army Corps of Engineers

SOIL Sampling Point: P7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Redo	ox Featur	es							
(inches)			Color (moist)	1 2			Texture		Remarks			
0 - 6						Loamy/Claye	ey	L				
							-				—	
<sup>1</sup> Type: C=Co	oncentration, D=Dep	letion RM=R	Reduced Matrix	MS=Mas	ked Sand	Grains	2l or	cation: PL=Pore Li	ning M=Matri	Y		
Hydric Soil		iodon, raw i	toddood Watin,	IVIO IVIGO	Roa Garie	Oranio	Indicators for Problematic Hydric Soils <sup>3</sup> :					
Histosol			Sandy Gle	eved Mat	rix (S4)		Coast Prairie Redox (A16)					
	ipedon (A2)		Sandy Re	-			Iron-Manganese Masses (F12)					
Black His			Stripped N									
	n Sulfide (A4)		Dark Surf	,	J)		Red Parent Material (F21)					
	Layers (A5)		Loamy Mu	, ,	oral (E1)		<ul><li>Very Shallow Dark Surface (F22)</li><li>Other (Explain in Remarks)</li></ul>					
2 cm Mu			Loamy Gl	-				Other (Explain in r	(emarks)			
	` '	. (A11)		-								
	Below Dark Surface rk Surface (A12)	(A11)	Depleted Redox Da			3Indicators of hydrophytic vacatation and						
	` '				, ,		IIIu	<sup>3</sup> Indicators of hydrophytic vegetation and				
	ucky Mineral (S1)	.\	Depleted Redox De				wetland hydrology must be present, unless disturbed or problematic.					
	cky Peat or Peat (S3	)	Redox De	pression	S (FO)	ı		uniess disturbed o	r problematic.			
	_ayer (if observed):											
Type:	Compacted (	Gravel	_									
Depth (in	_				Hydric Soil Pr	resent?	Yes	No	<u>X</u>			
Remarks:												
Could not sample below 6 inches due to compacted gravel.												
HYDROLO	GY											
Wetland Hyd	drology Indicators:											
Primary Indic	ators (minimum of o	ne is require	d; check all that	apply)			Sec	condary Indicators (	minimum of to	vo require	ed)	
Surface \	Water (A1)		Water-Sta	ained Lea	ves (B9)		Surface Soil Cracks (B6)					
High Wa	Aquatic F	auna (B1	3)			Drainage Patterns	(B10)					
Saturation	True Aqua	atic Plant	s (B14)			Dry-Season Water	Table (C2)					
Water Marks (B1)  Hydrogen Sulfide Odor (C1)							Crayfish Burrows (	(C8)				
Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roo							oots (C3)	Saturation Visible	on Aerial Imaç	gery (C9)	)	
Drift Dep	osits (B3)		Presence	of Reduc	ced Iron (	C4)		Stunted or Stresse	ed Plants (D1)			
Algal Ma	t or Crust (B4)		Recent Iro	on Reduc	tion in Ti	lled Soil	ls (C6)	Geomorphic Positi	on (D2)			
Iron Dep	osits (B5)		Thin Mucl	k Surface	e (C7)			FAC-Neutral Test	(D5)			
Inundation Visible on Aerial Imagery (B7)  Gauge or Well Data (D9)								<del>-</del> "				
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)												
Field Obser	vations:											
Surface Wat	er Present? Ye	s	No X	Depth (i	nches):							
Water Table Present? Yes No X Depth (inches):												
Saturation Present? Yes No X Depth (inches):						Wetland Hydrology Present? Yes No X						
(includes cap					′ <del>-</del>			0.				
,	corded Data (stream	gauge, mon	itoring well, aeria	al photos	, previous	sinspec	ctions), if available	le:				
	•	-	-	-	•	•						
Remarks:												
No wetland h	ydrology indicators	bserved.										



Krueger Property Project #: 20210478 June 21, 2021

# Appendix D | Site Photographs

Solutions for people, projects, and ecological resources.



Photo #1 Sample point P1



Photo #3 Sample point P1



**Photo #5** Sample point P2



Photo #2 Sample point P1



Photo #4 Sample point P1



**Photo #6** Sample point P2



**Photo #7** Sample point P2



**Photo #9** Sample point P3



**Photo #11**Sample point P3



**Photo #8** Sample point P2



**Photo #10**Sample point P3



**Photo #12**Sample point P3



Photo #13 Sample point P4



**Photo #15**Sample point P4



**Photo #17**Sample point P5



Photo #14Sample point P4



Photo #16Sample point P4



Photo #18 Sample point P5



Photo #19 Sample point P5



Photo #21 Sample point P6



Photo #23 Sample point P6



Photo #20 Sample point P5



**Photo #22**Sample point P6



Photo #24Sample point P6



Photo #25 Sample point P7



Photo #27 Sample point P7



Photo #29 Waterway



Photo #26 Sample point P7



Photo #28 Sample point P7



Photo #30 Waterway



Photo #31 Waterway



# Appendix E | Delineator Qualifications

Solutions for people, projects, and ecological resources.



## **Scott Fuchs**

Environmental Scientist 506 Springdale Street Mount Horeb, WI 53572 scott@heartlandecological.com (608) 490-2450



Scott is an environmental scientist with expertise in botany, wetland assessment, natural plant communities of Wisconsin, and geographic information systems (GIS). Scott has been involved in the field of ecological restoration and conservation for over five years working as a field restoration ecologist and crew leader, ecology research assistant, wetland delineator, and GIS administrator. Since joining Heartland, Scott has provided support for completion of hundreds of wetland delineations and determinations, served as lead delineator on numerous delineations that were subsequently confirmed by WI DNR wetland regulatory staff, prepared wetland and waterway permit applications to the DNR and USACE, and performed vegetation and hydrology monitoring and reporting for wetland mitigation projects. Scott also provides technical support by assisting with natural area restoration planning, monitoring and management, developing GIS based project mapping, collecting and interpreting historic aerial imagery, and performing analysis of GIS data sets.

His experience includes: wetland determination and delineation, long-term vegetation and wildlife monitoring and reporting, collecting and processing monitoring well hydrology data, wetland mitigation bank viability analysis and planning, preparing state artificial wetland exemption requests, preparing wetland and waterway permit applications, compiling wetland delineation reports, rare species surveys, invasive species control, conducting prescribed burns, and invasive herbaceous, shrub, and tree removal.

### Education

BS, Biology (Emphasis in Ecology), University of Wisconsin – Whitewater, Whitewater, WI, 2015

Basic Wetland Delineation Training, Continuing Education and Extension, UW-La Crosse, La Crosse WI, 2019

Advanced Wetland Delineation Training, Continuing Education and Extension, UW-La Crosse, La Crosse WI, 2019

Critical Methods in Wetland Delineation, Continuing Education and Extension, UW-La Crosse, Madison WI, 2019, 2020, 2021

# **Certifications and Training**

Wildland Fire Fighter Type 2, National Wildfire Coordinating Group, Incident Management Specialists, LLC, Madison WI, 2017

Level One Chainsaw Safety Training, Forest Industry Safety & Training Alliance, Eau Claire WI, 2016

Certified Pesticide Applicator (Category 6), Wisconsin Department of Trade and Consumer Protection, Madison WI, 2016

# **Project Experience**

#### **Wetland Determinations and Delineations**

Nuemann Development: Port Washington Road Subdivision, Ozaukee Co., WI Performed a wetland determination and delineation within a 50-acre agricultural field. Compiled historic information to support an approved WI Act 183 artificial wetland exemption for wetlands located on site.



#### 1520 LLC: Port Washington Road Commercial Development, Ozaukee Co., WI

Performed a wetland determination and delineation within a highly disturbed 3-acre parcel containing clayey soils that was subsequently confirmed by WI DNR wetland regulatory staff. Compiled historic information to support an approved WI Act 183 artificial wetland exemption for wetlands located on site.

Private Landowner: Bear Creek Wetland Delineation and Driveway Crossing Permitting, Monroe Co., WI Performed a wetland determination and delineation along a section of Bear Creek with several old oxbows to support culvert installation and minor wetland disturbance permitting for the purposes of installation of a rural driveway. This wetland delineation was subsequently confirmed by WI DNR wetland regulatory staff and was utilized in obtaining necessary state and federal permits. Prepared and obtained culvert installation and general wetland disturbance permits from the WI DNR and USACE.

#### **Hydrology Monitoring Well Data Analysis**

#### Wisconsin DNR: Soik ILF Mitigation Site, Portage County, WI

Performed collection and processing of data from 14 monitoring wells present on a 60-acre ILF mitigation site. Performed analysis of hydrology data to determine if the site's wetland hydrology standard was met. Summarized results and created graphical representations of hydrology monitoring for end-of-year reporting to the WDNR and USACE.

#### Bear Development: Barnes Prairie Mitigation Bank Site, Kenosha Co., WI

Performed collection and processing of data from 46 hydrology monitoring wells located throughout a 230-acre agricultural field. Analyzed data to determine if wetland hydrology was present in the location of the sampling wells. Produced graphical representations of precipitation and ground water level data.

#### Wisconsin DNR: Evansville ILF Mitigation Bank Site, Rock Co., WI

Performed collection and processing of data from 9 hydrology monitoring wells within agricultural fields, disturbed wet meadow, and shrub-carr communities across a 40-acre site. Analyzed data to determine if wetland hydrology was present in the location of the sampling wells and to compile baseline information prior to wetland restoration work. Produced graphical representations of precipitation and ground water level data.

#### Vegetation, Wildlife, and Rare Species Monitoring

#### Wisconsin DNR: Soik ILF Mitigation Site, Portage County, WI

Established quantitative vegetation monitoring plots and performed vegetation monitoring of a 60-acre wetland mitigation bank in Wisconsin's central sands region. Vegetation monitoring was completed to assess progression of the site towards meeting regulatory performance standards. Vegetation monitoring including sample plot surveys and timed meander surveys. The results were summarized to assess the various performance metrics across a variety of wetland vegetative community and compensation types.

### Kreyer Creek Compensatory Wetland Mitigation Bank Site, Monroe County, WI

Conducted quantitative vegetation monitoring of this 200+ acre compensatory wetland mitigation site. Vegetation monitoring was completed to assess progression of the site towards meeting regulatory performance standards. Vegetation monitoring including sample plot surveys and timed meander surveys. The results were summarized to assess the various performance metrics including florist quality assessments and diversity, invasive and noninvasive species relative cover, and prevalence indices of hydrophytic vegetation. The vegetation data and results were incorporate into the annual monitoring report required by the U.S. Army Corps of Engineers and Interagency Review Team.

#### Nantucket Conservation Foundation: Head of the Plains, Nantucket County, MA

Conducted vegetation monitoring, small mammal live-trapping, and insect pitfall trapping to collect data that is being used in a longitudinal study exploring the viability of different ecological management and restoration techniques in sandplain grassland habitat, a globally rare ecological community.



#### Nantucket Conservation Foundation: Head of the Plains, Nantucket County, MA

Installed acoustic bat monitoring devices and regularly downloaded the recorded data to determine the presence of different bat species. Assisted in mist-netting and radio telemetry tracking of federally threatened northern long-eared bats. Performed emergence counts of bat roosting locations discovered via radio telemetry tracking.

#### Nantucket Conservation Foundation: Coatue, Nantucket County, MA

Conducted vegetation monitoring for a graduate level study investigating the effects of cormorant nesting on plant communities in remote sand dune/shoal habitats.

### **Ecological Restoration and Invasive Species Management**

#### Big Hollow Compensatory Wetland Mitigation Bank, Sauk County, WI

Assisted with the development of a Compensation Site Plan (CSP) for a nearly 200-acre compensatory wetland mitigation bank site as part of the Mitigation Banking Instrument (MBI). Completed various technical components of the CSP including assessment of the overall site characteristics and history, vegetation restoration plan, development of regulatory performance standards, and monitoring and management plan. Completed all site mapping and plans utilizing GIS.

Good Oak Ecological Services, Numerous Locations Throughout Dane County and Surrounding Areas, WI Performed invasive species management and ecological restoration activities in prairie, oak savanna, and oak woodland habitats throughout Dane County and surrounding areas. Activities included chemical and mechanical control of invasive species, invasive brush and tree removal with chainsaws and brush cutters, prescribed burns on small to medium (1-15 acres) sized prairies and oak woodlands, native vegetation seeding, and erosion control installation.

#### UW-Madison, UW-Madison Lakeshore Preserve, Dane County, WI

Performed invasive species management on thistle, garlic mustard, dame's rocket, and porcelain berry via chemical spraying and cut-and-treat methods.

Nantucket Conservation Foundation: Head of the Plains, Sanford Farm / Ram Pasture, Madequecham Valley, Nantucket County, MA

Performed cut-and-treat management of invasive Phragmites in salt marsh habitats.



# Appendix F | WDNR Delineation Confirmation Letter

Solutions for people, projects, and ecological resources.

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2300 N Dr Martin L King Jr Dr.
Milwaukee, , 53212

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



06/18/2021

Brett Krueger W7650 State Highway 39 Blanchardville, WI 53516 WIC-SC-2021-13-01978

RE: Wetland Delineation Report for "Krueger Property" located in the Town of Perry, Dane County

Dear Mr. Krueger:

We have received and reviewed the wetland delineation report prepared for the above-mentioned site by Heartland Ecological Group. This letter will serve as confirmation that the wetland boundaries as shown on the included wetland delineation map are acceptable. This finding is based upon a June 8, 2021 field visit. Any filling or grading within these areas will require DNR approvals. Our wetland confirmation is valid for five years unless altered site conditions warrant a new wetland delineation be conducted. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

If there is a navigable stream identified on the property. DNR Chapter 30 permits will be needed if earthwork (filling, dredging, etc.) or structures (culverts, bridges, erosion control, etc.) are proposed in or adjacent to the waterway.

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization or permit, to comply with the state's Endangered Species Law. To ensure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <a href="http://dnr.wi.gov/topic/ERReview/Review.html">http://dnr.wi.gov/topic/ERReview/Review.html</a>. The Endangered Resources Program will provide a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

If you have any questions, please call me at (414) 308-6780 or email kara.brooks@wisconsin.gov.

Sincerely,

Kara Brooks

Wetland Identification Specialist

Copy to:

USACE Project Manager Scott Fuchs, Heartland Ecological Group

