# Assured Wetland Delineation Report

## Dominie Property

Town of Westport, Dane County, Wisconsin

July 27, 2020

Project Number: 20200342

506 Springdale Street | Mount Horeb, WI 53572 | www.heartlandecological.com

# Dominie Property

Town of Westport, Dane County, Wisconsin

June 27, 2020

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**Prepared for:**

Mr. Shane Knickmeier

2311 Valley Street

Cross Plains, WI 53528

mrshanek@aim.com

**Prepared by:**

Heartland Ecological Group, Inc.

506 Springdale Street

Mount Horeb, WI 53572

608-490-2450

www.heartlandecological.com

Eric C. Parker, Principal

Scott Fuchs, Environmental Technician

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# 1.0 Introduction

Heartland Ecological Group, Inc. ("Heartland") completed an assured wetland determination and delineation on the Dominie Property site on July 10, 2020 at the request of Shane Knickmeier. Fieldwork was completed by Eric Parker, an assured delineator qualified via the Wisconsin Department of Natural Resources (WDNR) Wetland Delineation Assurance Program (Appendix E, Qualifications). The 16.47-acre site (the "Study Area") is adjacent to, and southeast of, the dead end of Harbort Road / Mansfield Road, in the northern ½ of Section 28, T8N, R9E, Town of Westport, 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.

One (1) wetland area totaling approximately 10.36 acres was 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), Google Earth™, and Dane County's interactive mapping. 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™ 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 normal 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 extremely moist range. Fieldwork was completed within the dry-season based on long-term regional hydrology data utilized in the WebWIMP Climatic Water Balance web site.

### General Topography and Land Use

The topography within the Study Area was gently sloping to the south, with little overall change in elevation. A topographic high of approximately 859 feet above mean sea level (msl) is present adjacent to the dead end of Harbort Road / Mansfield Road, and a topographic low of approximately 851 feet above msl is present adjacent to an excavated canal connected to Sixmile Creek / Lake Mendota (Figures 2 and 6, Appendix A). Land uses within the Study Area consist of Harbort Road, residential homes, disturbed upland woods, and wetlands. Surrounding areas are primarily wetlands, upland woods, and a small agricultural field. General drainage is to the south towards Sixmile Creek / Lake Mendota.

## 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 the predominantly hydric Houghton muck and Wacousta silty clay loam soil types (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 |
|---|---|---|---|---|
| GsA: Grays silt loam, 0 to 2 percent slopes | Grays | 100 | Lake plains | No |
| HaA: Hayfield silt loam, 0 to 3 percent slopes | Hayfield | 90 | Outwash plains | No |
| | Marshan | 5 | Depressions | Yes |
| | Dresden | 3 | Outwash plains | No |
| | Kegonsa | 2 | Outwash plains | No |
| Ho: Houghton muck | Houghton | 100 | Depressions on stream terraces | Yes |
| KeA: Kegonsa silt loam, 0 to 2 percent slopes | Kegonsa | 100 | Outwash plains | No |
| W: Water | Water greater than 40 acres | 100 | — | Unranked |
| Wa: Wacousta silty clay loam, 0 to 2 percent slopes | Wacousta | 80-90 | Interdrumlins | Yes |
| | Sable | 5-10 | Interdrumlins | Yes |
| | Sebewa | 5-10 | Interdrumlins | Yes |

## Wetland Mapping

The Wisconsin Wetlands Inventory (WWI) mapping (Figure 5, Appendix A) depicts one (1) wetland complex within the southern half of the Study Area. This wetland is depicted as a complex of emergent, shrub carr, and forested wetlands (E2H/S3K/T3K).

## 3.2 Field Review

One (1) wetland was identified and delineated within the Study Area. Wetland determination data sheets (Appendix C) were completed at four (4) 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 | Wet Meadow / Shrub Carr / Shallow Marsh | Contiguous to Sixmile Creek / Lake Mendota | Moderately susceptible, 50 feet | 10.36 |
| *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. | | | | **10.36** |

### Wetland 1 (W-1)

Wetland 1 (W-1) is a 10.36-acre complex of wet meadow, shrub carr, and shallow marsh located within the southern half of the Study Area. Wetland W-1 is contiguous with Sixmile Creek / Lake Mendota, which lie just outside the Study Area to the south. The boundary of W-1 generally followed a moderately-defined topographic break.

Dominant vegetation observed at the sample point completed in W-1 included jewelweed (*Impatiens capensis,* FACW), rice cutgrass (*Leersia oryzoides,* OBL), red-osier dogwood (*Cornus alba,* FACW), and quaking aspen (*Populus tremuloides,* FAC).

The Loamy Mucky Mineral (F1) hydric soil indicator was observed at the sample point completed within W-1, which is somewhat consistent with the NRCS-mapped Houghton muck and Wacousta silty clay loam soil types.

The primary wetland hydrology indicators of High Water Table (A2) and Saturation (A3) were noted within W-1, while secondary indicators included Geomorphic Position (D2) and a positive FAC-Neutral Test (D5).

## 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 an assured wetland determination and delineation within the Dominie Property site on July 10, 2020 at the request of Shane Knickmeier. Fieldwork was completed by Eric C. Parker, SPWS, an assured delineator qualified via the WDNR Wetland Delineation Assurance Program. The Study Area lies in Section 28, T8N, R9E, Town of Westport, Dane County, WI.

One (1) wetland area was delineated and mapped within the 16.47-acre Study Area. The wetland, which may be classified as a complex of wet meadow, shrub carr, and shallow marsh, totals approximately 10.36 acres within the Study Area. Sixmile Creek / Lake Mendota is located along the southern boundary of the Study Area.

Wetlands and waterways discussed in this report may be subject to federal regulation under the jurisdiction of the USACE, state regulation under the jurisdiction of the WDNR, and the local zoning authority. Heartland recommends this report be submitted to the USACE 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 findings may include but not limited to precipitation patterns, drainage modifications, changes or modification to vegetation, and the time of year.

# 5.0 References

Eggers, S. D., & D. M. Reed. (2014). *Wetland Plants and Plant Communities of Minnesota and Wisconsin* (V. 3.1). U.S. Army Corps of Engineers, Regulatory Branch, St. Paul, MN District. See: http://www.mvp.usace.army.mil/.

Environmental Laboratory (1987). *Corps of Engineers Wetlands Delineation Manual*, Tech. Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Lichvar, R.W., D. L. Banks, W. N. Kirchner, and N.C. Melvin. (2016). *The National Wetland Plant List:* 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X. See: http://www.phytoneuron.net/.

Midwestern Regional Climate Center. (2014). *cli-MATE* [climate data access tool]. See: http://mrcc.isws.illinois.edu/CLIMATE/.

National Oceanic and Atmospheric Administration (NOAA). (2015) Regional Climate Centers Applied Climate Information System. *WETS table*. See: http://agacis.rcc-acis.org.

NOAA National Center for Environmental Information. (2018) *Historic Palmer Drought Indices*. See: https://www.ncdc.noaa.gov/temp-and-precip/drought/historical-palmers/psi/201512-201601.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture (USDA). (2018). *Soil Survey Geographic (SSURGO) Database*. See: http://websoilsurvey.nrcs.usda.gov/ or http://datagateway.nrcs.usda.gov/.

Soil Survey Staff, Natural Resources Conservation Service, USDA. (2018). *Web Soil Survey*. See: http://websoilsurvey.nrcs.usda.gov/.

U.S. Army Corps of Engineers (USACE) and Wisconsin Department of Natural Resources (WDNR). (March 2015). *"Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and the Wisconsin Department of Natural Resources"*. See: http://dnr.wi.gov/topic/wetlands/documents/FinalWisconsinDelineationGuidance.pdf.

USACE. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0*). (2011). ed. J.S. Wakely, R.W. Lichvar,

C.V. Nobel, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USACE St. Paul District & Minnesota Board of Water & Soil Resources. (July 2016). *Guidance for Offsite Hydrology/Wetland Determinations*. See: http://www.mvp.usace.army.mil/Missions/Regulatory/Delineation/.

United States Department of Agriculture (USDA), Farm Service Agency (FSA). (2018) [Dane County, Wisconsin aerial photographs]. National Agriculture Imagery Program (NAIP). Salt Lake City, UT: Aerial Photography Field Office.

USDA, Natural Resource Conservation Service (NRCS). (2010). *Field Indicators of Hydric Soils in the United States*, Version 8.2. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.

United States Department of the Interior (USDI), U.S. Geological Survey (USGS). *Wisconsin 7.5 Minute Series (Topographic) Maps.* 1:24,000. Reston, VA.

USDI, USGS. National Hydrography Dataset (NHD) 24K scale data. See: https://nhd.usgs.gov/.

Wetland Training Institute, Inc (WTI). (2010*). Pocket guide to hydric soil field indicators.* (Robert J. Pierce, Ed.). (7th ed.). Glenwood, NM: Wetland Training Institute, Inc.

Willmott, C.J. and K. Matsuura. (2016). *Web-Based Water-Budget Interactive Modeling Program (WebWIMP).* University of Delaware Department of Geography. Newark, DE. See: climate.geog.udel.edu/~wimp/.

WDNR, Surface Water Data Viewer Interactive Web-mapping Tool. (2018). See: https://dnr.wi.gov/topic/surfacewater/swdv/.

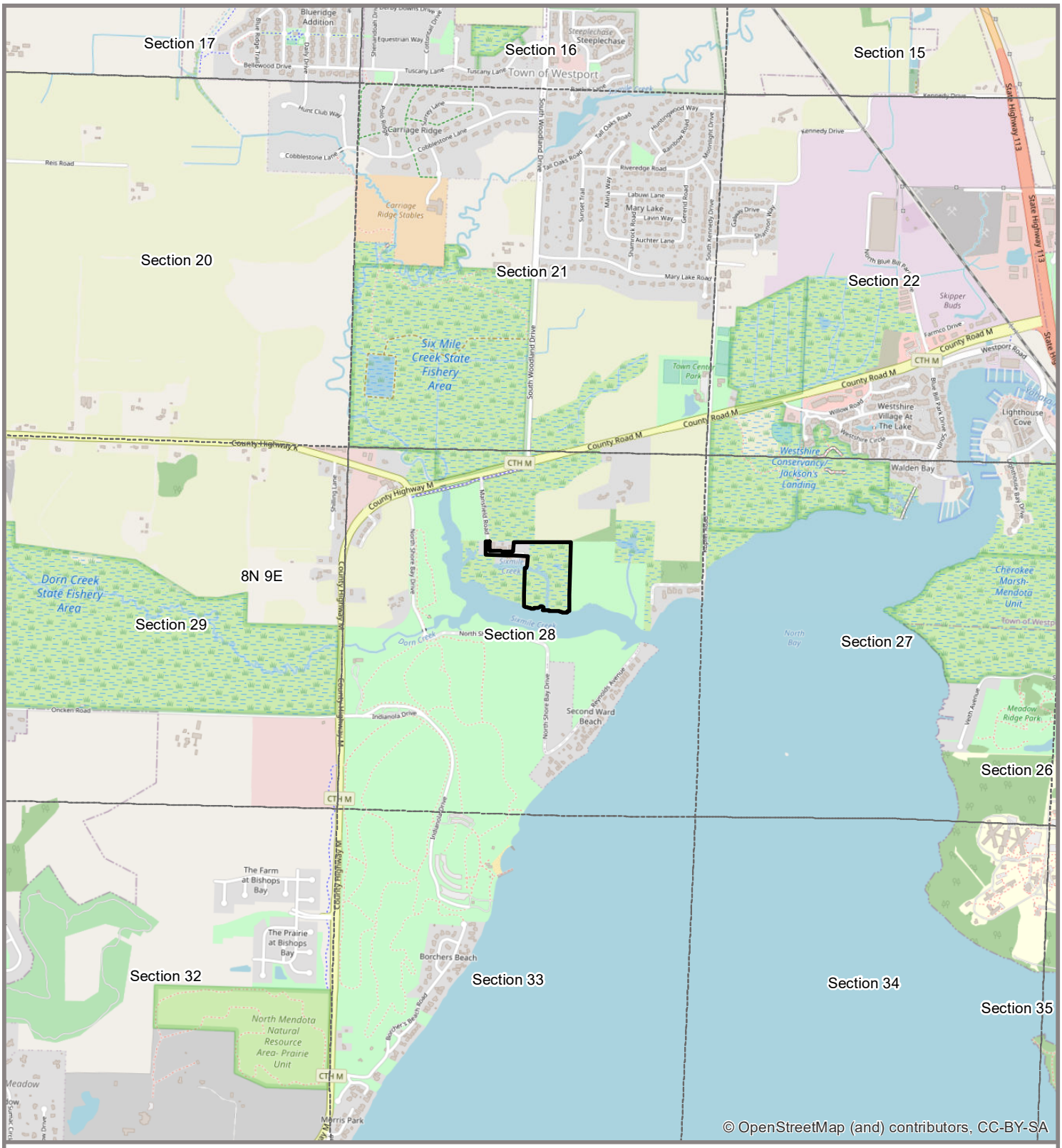
WDNR, Division of Water. (2010). [24k hydrography geospatial data layer]. See: ftp://dnrftp01.wi.gov/geodata/hydro_24k/.

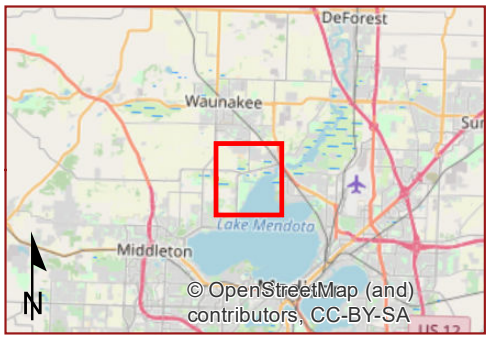
WDNR, WiDNR Open Data. (2019). [Wisconsin Wetland Inventory Geodatabase]. See: https://www.arcgis.com/home/item.html?id=16119ac2100c4286ab8219bf03377ebf.

Woodward, D.E. ed. (1997). *Hydrology Tools for Wetland Determination*, WETS Analysis, Chapter 19. Engineering Field Handbook. USDA, NRCS, Fort Worth, TX.

Shane Knickmeier
Dominie Property
Project #: 20200342
July 27, 2020

# Appendix A | Figures




Study Area (16.47 ac)

Township

Section

0 1,000 2,000 Ft

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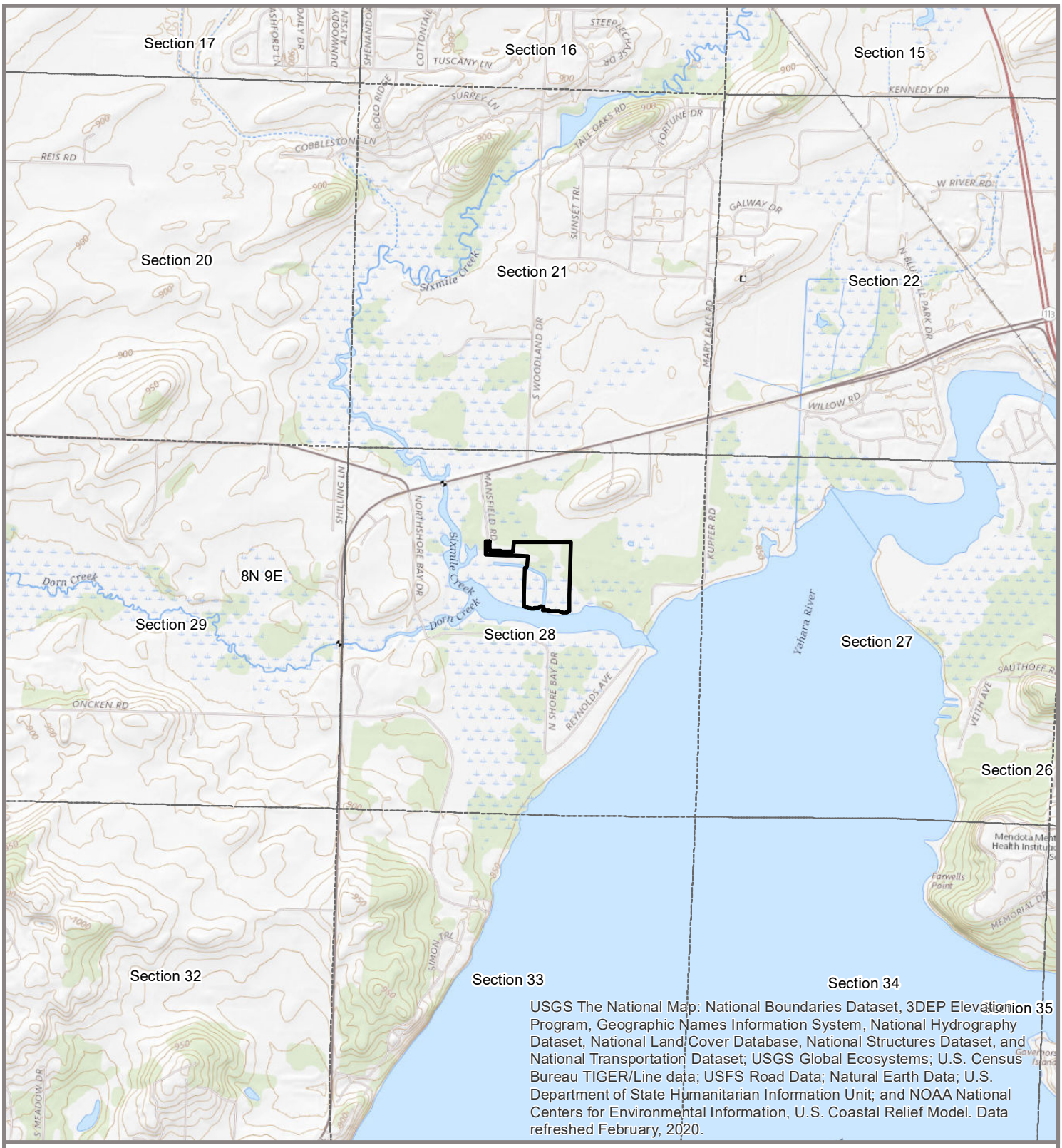
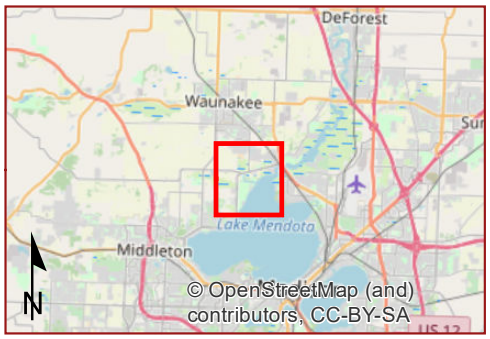
**Figure 1. Project Location**

Paul-Meghan Dominie Prop.
Project #20200342
T8N, R9E, S28
T Westport, Dane Co, WI

*OpenStreetMap Data: ESRI* 7/7/2020




Study Area (16.47 ac)

Township

Section

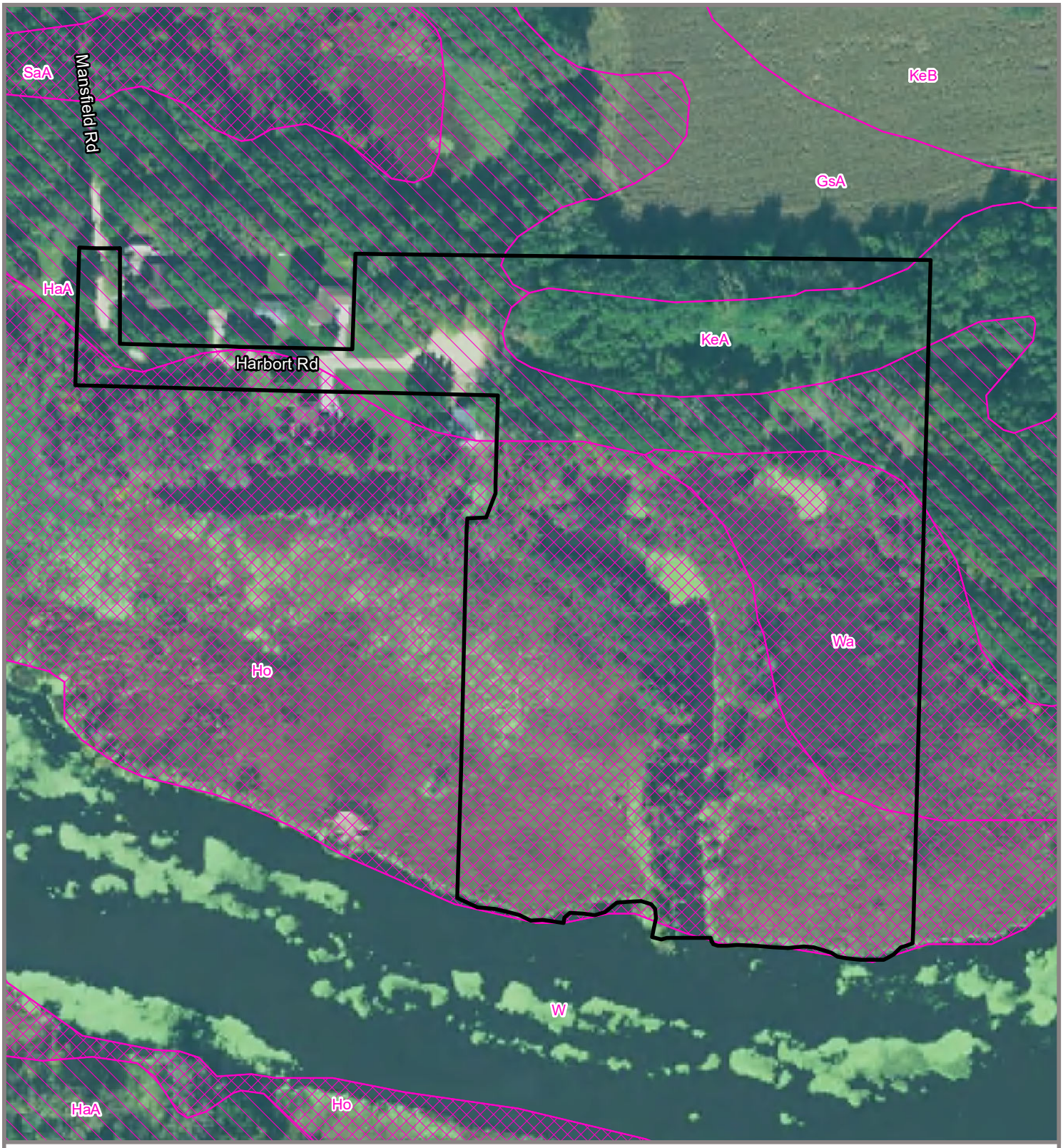
0 1,000 2,000 Ft

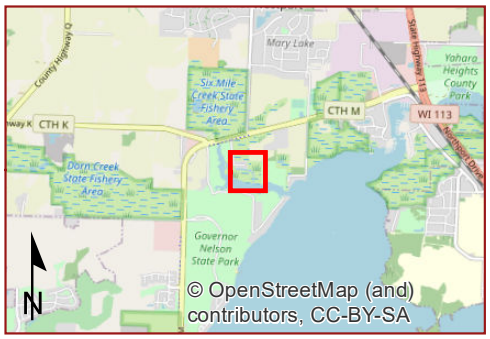
Heartland ECOLOGICAL GROUP INC

**Figure 2. USGS Topography**

Paul-Meghan Dominie Prop.
Project #20200342
T8N, R9E, S28
T Westport, Dane Co, WI

*USGSTopo*
*Data: USGS* *7/7/2020*




Study Area (16.47 ac)

0 100 200 Ft

**NRCS Soil Survey Data**

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

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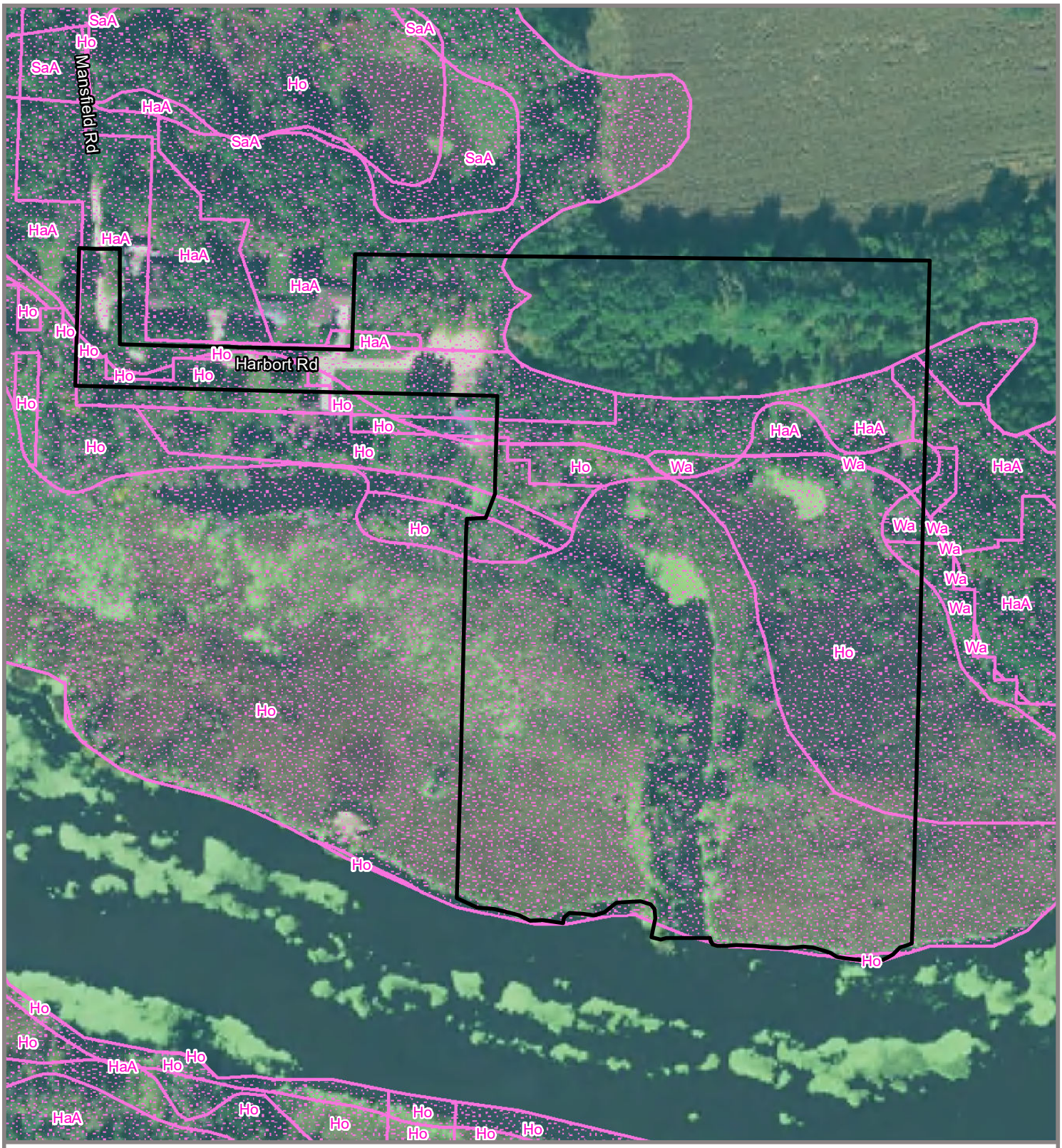
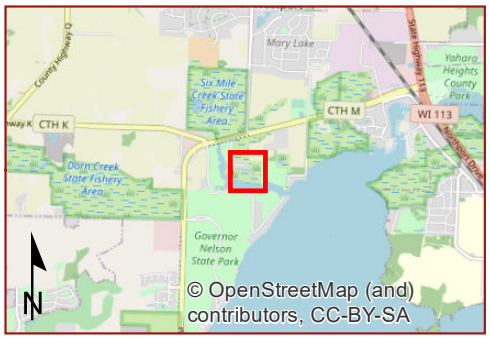
**Figure 3. NRCS Hydric Soils**

Paul-Meghan Dominie Prop.
Project #20200342
T8N, R9E, S28
T Westport, Dane Co, WI

*2018 NAIP*
*Data: NRCS* *7/7/2020*




Study Area (16.47 ac)

Maximum Extent Wetland Indicators

0 100 200 Ft

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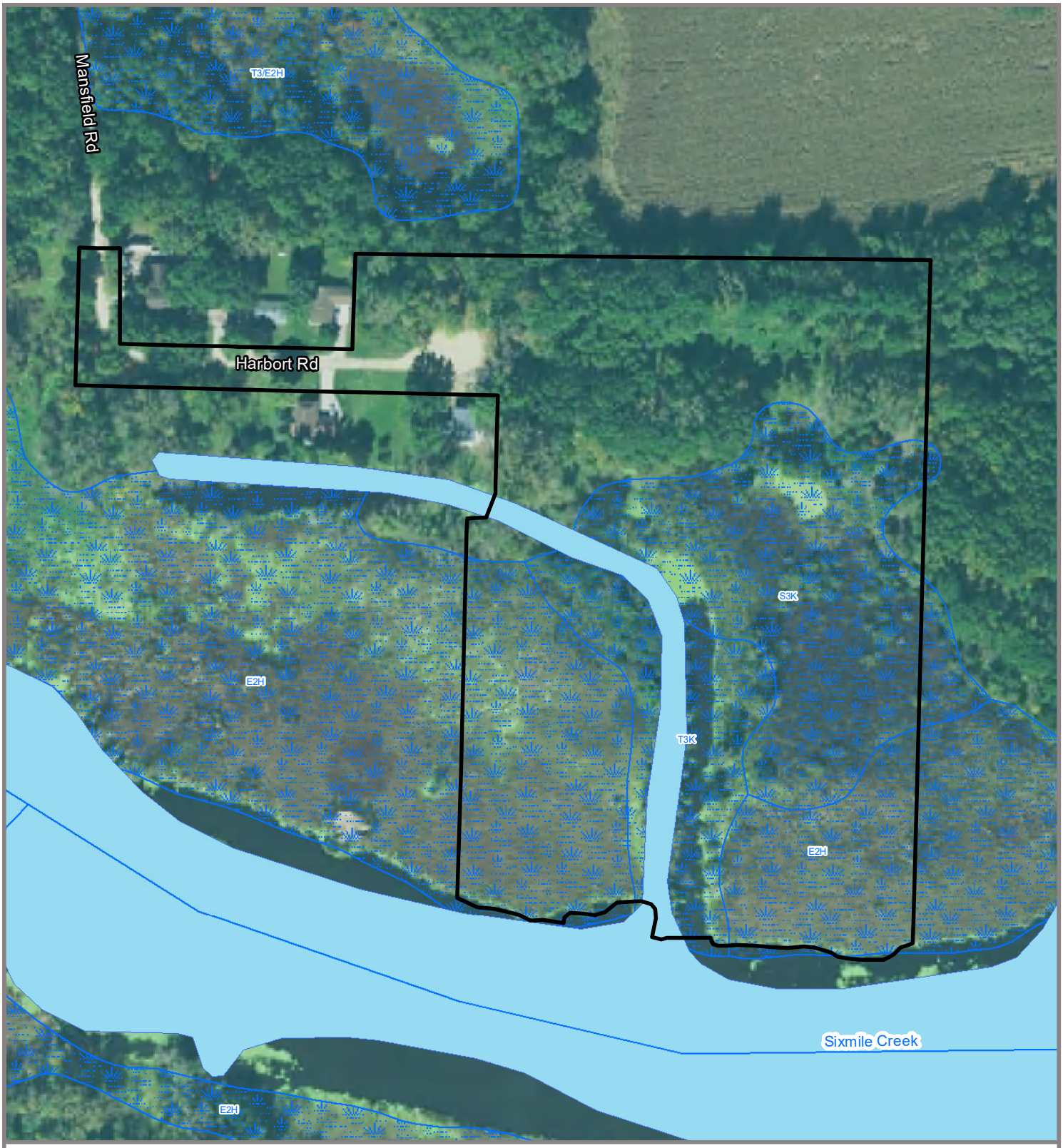
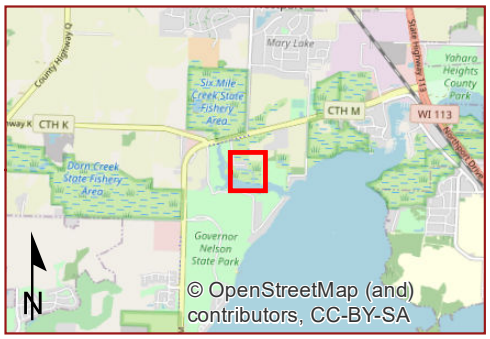
**Figure 4. SWDV Wetland Indicators**

Paul-Meghan Dominie Prop.
Project #20200342
T8N, R9E, S28
T Westport, Dane Co, WI

*2018 NAIP*
*Data: WDNR* *7/7/2020*




Study Area (16.47 ac)

WWI Wetlands

NHD Waterbody

NHD Waterway

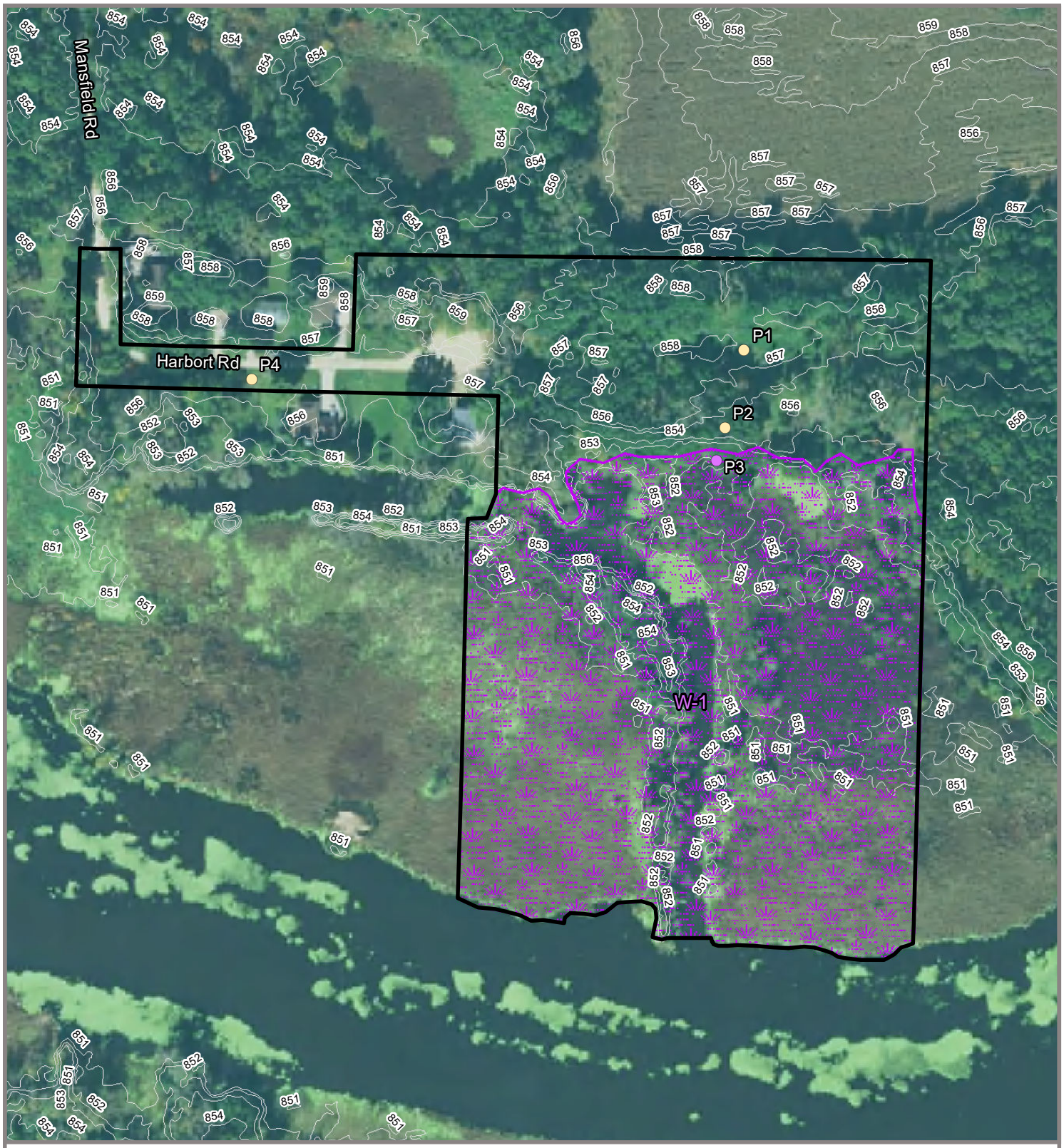
0 100 200 Ft

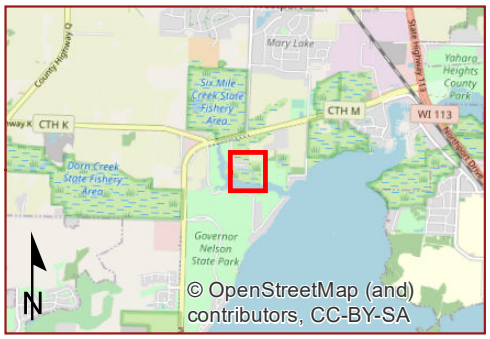
Heartland ECOLOGICAL GROUP INC

**Figure 5. Wisconsin Wetland inventory**

Paul-Meghan Dominie Prop.
Project #20200342
T8N, R9E, S28
T Westport, Dane Co, WI

*2018 NAIP*
*Data: WDNR, USGS* *7/7/2020*




Study Area (16.47 ac)

Dane Co 1' Contours

Field Delineated Wetlands (10.36 ac)

0 100 200 Ft

**Sample Points**

- Upland
- Wetland

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**Figure 6. Field Delineated Wetlands**

Paul-Meghan Dominie Prop.
Project #20200342
T8N, R9E, S28
T Westport, Dane Co, WI

*2018 NAIP*
*Data: Dane Co* *7/13/2020*

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Dominie Property
Project #: 20200342
July 27, 2020

# Appendix B | WETS Analysis

## WETS Analysis Worksheet

Project Name: Domini Property
Project Number: 20200342
Period of interest: April - June
Station: Dane County Regional Airport
County: Dane County

**Long-term rainfall records (from WETS table)**

| | Month | 3 years in 10 less than | Normal | 3 years in 10 greater than |
|---|---|---|---|---|
| 1st month prior: | June | 3.22 | 5.27 | 6.39 |
| 2nd month prior: | May | 2.75 | 4.10 | 4.91 |
| 3rd month prior: | April | 2.95 | 3.78 | 4.36 |
| | | Sum = | **13.15** | |

**Site determination**

| | Site Rainfall (in) | Condition Dry/Normal*/Wet | Condition** Value | Month Weight | Product |
|---|---|---|---|---|---|
| | 5.07 | Normal | 2 | 3 | 6 |
| | 5.42 | Wet | 3 | 2 | 6 |
| | 2.04 | Dry | 1 | 1 | 1 |
| Sum = | **12.53** | | | Sum*** = | **13** |

*Normal precipitation with 30% to 70% probability of occurrence

Determination:

| | |
|---|---|
| | Wet |
| | Dry |
| **X** | Normal |

**Condition value:

| | |
|---|---|
| Dry = | 1 |
| Normal = | 2 |
| Wet = | 3 |

***If sum is:

| | |
|---|---|
| 6 to 9 | then period has been drier than normal |
| 10 to 14 | then period has been normal |
| 15 to 18 | then period has been wetter than normal |

Precipitation data source: Midwest Regional Climate Center, cli-MATE: MRCC Application Tools Environment

Reference: Donald E. Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

| Date | Ppt. (Inches) |
|---|---|
| 7/1/2020 | 0.00 |
| 7/2/2020 | 0.00 |
| 7/3/2020 | 0.00 |
| 7/4/2020 | 0.00 |
| 7/5/2020 | 0.00 |
| 7/6/2020 | 0.00 |
| 7/7/2020 | 2.17 |
| 7/8/2020 | 0.00 |
| 7/9/2020 | 1.97 |
| 7/10/2020 | 0.46 |
| Total | 4.60 |

Shane Knickmeier
Dominie Property
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July 27, 2020

# Appendix C | Wetland Determination Data Sheets

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dominie Property City/County: T Westport / Dane Co Sampling Date: 2020-07-10

Applicant/Owner: Shane Knickmeier State: Wisconsin Sampling Point: P1

Investigator(s): Eric C Parker - Heartland Ecological Group Section, Township, Range: Section 28, T8N, R9E

Landform (hillslope, terrace, etc.): Sideslope Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR or MLRA): L 95B Lat: 42.7805481 Long: -88.2168562 Datum: WGS 84

Soil Map Unit Name: KeA NWI classification: None depicted

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
WETS Analysis indicates antecedent precipitation conditions are in the normal range.

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (minimum of two required)

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

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✔ | Depth (inches): _____ |
| Water Table Present? | Yes _____ | No ✔ | Depth (inches): _____ |
| Saturation Present? (includes capillary fringe) | Yes _____ | No ✔ | Depth (inches): _____ |

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

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

Remarks:
No wetland hydrology indicators observed, no saturation.

**VEGETATION –** Use scientific names of plants. Sampling Point: P1

| Tree Stratum (Plot size: 30 ft r) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | = Total Cover | | |
| **Sapling/Shrub Stratum (Plot size: 15 ft r)** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | = Total Cover | | |
| **Herb Stratum (Plot size: 5 ft r)** | | | |
| 1. Phalaris arundinacea | 100 | ✔ | FACW |
| 2. Solidago canadensis | 5 | | FACU |
| 3. Asclepias syriaca | 1 | | UPL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 106% = Total Cover | | |
| **Woody Vine Stratum (Plot size: 30 ft r)** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 100 | x 2 = | 200 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 5 | x 4 = | 20 |
| UPL species | 1 | x 5 = | 5 |
| Column Totals: | 106 (A) | | 225 (B) |

Prevalence Index = B/A = 2.1

**Hydrophytic Vegetation Indicators:**

✔ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

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

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

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

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

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

No trees, shrubs or woody vines in plots.

**SOIL**

Sampling Point: P1

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

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0 - 11 | 7.5YR 4/3 | 100 | | | | | Silt Loam | |
| 11 - 24 | 10YR 5/4 | 100 | | | | | Silt Loam | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils[3]:**

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

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

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dominie Property City/County: T Westport / Dane Co Sampling Date: 2020-07-09

Applicant/Owner: Shane Knickmeier State: Wisconsin Sampling Point: P2

Investigator(s): Eric C Parker - Heartland Ecological Group Section, Township, Range: Section 28, T8N, R9E

Landform (hillslope, terrace, etc.): Sideslope Local relief (concave, convex, none): None Slope (%): 4

Subregion (LRR or MLRA): L 95B Lat: 42.7805481 Long: -88.2168562 Datum: WGS 84

Soil Map Unit Name: HaA NWI classification: S3K

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
WETS analysis indicates that antecedent precipitation conditions are in the normal range.

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (minimum of two required)

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

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes _____ | No ✔ | Depth (inches): _____ | |
| Water Table Present? | Yes ✔ | No _____ | Depth (inches): 18 | |
| Saturation Present? (includes capillary fringe) | Yes ✔ | No _____ | Depth (inches): 16 | **Wetland Hydrology Present?** **Yes** _____ **No** ✔ |

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

Remarks:
No wetland hydrology indicators observed.
.

**VEGETATION –** Use scientific names of plants.

Sampling Point: P2

| Tree Stratum (Plot size: 30 ft r) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Quercus rubra | 40 | ✔ | FACU |
| 2. Prunus serotina | 15 | ✔ | FACU |
| 3. Populus tremuloides | 5 | | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 60% | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 15 ft r) | | | |
| 1. Rubus occidentalis | 3 | ✔ | UPL |
| 2. Lonicera X bella | 2 | ✔ | FACU |
| 3. Rosa multiflora | 1 | | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 6% | = Total Cover | |
| **Herb Stratum** (Plot size: 5 ft r) | | | |
| 1. Cornus racemosa | 20 | ✔ | FAC |
| 2. Lolium perenne | 20 | ✔ | FACU |
| 3. Geum canadense | 15 | ✔ | FAC |
| 4. Rosa multiflora | 10 | | FACU |
| 5. Rubus occidentalis | 7 | | UPL |
| 6. Parthenocissus quinquefolia | 5 | | FACU |
| 7. Phalaris arundinacea | 5 | | FACW |
| 8. Circaea canadensis | 3 | | FACU |
| 9. Potentilla simplex | 3 | | FACU |
| 10. Symphyotrichum lateriflorum | 2 | | FAC |
| 11. | | | |
| 12. | | | |
| | 90% | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30 ft r) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | | = Total Cover | |

**Dominance Test worksheet:**

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 5 | x 2 = | 10 |
| FAC species | 42 | x 3 = | 126 |
| FACU species | 99 | x 4 = | 396 |
| UPL species | 10 | x 5 = | 50 |
| Column Totals: | 156 (A) | | 582 (B) |

Prevalence Index = B/A = 3.7

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

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

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

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

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

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

Disturbed hardwoods

**SOIL**

Sampling Point: P2

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0 - 13 | 7.5YR 4/3 | 100 | | | | | Silt Loam | |
| 13 - 24 | 10YR 5/4 | 100 | | | | | Sandy loam | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils[3]:**

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

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

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

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

Remarks:

No hydric soil indicators observed.

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dominie Property City/County: T Westport / Dane Co Sampling Date: 2020-07-10

Applicant/Owner: Shane Knickmeier State: Wisconsin Sampling Point: P3

Investigator(s): Eric C Parker - Heartland Ecological Group Section, Township, Range: Section 28, T8N, R9E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): L 95B Lat: 42.7805481 Long: -88.2168562 Datum: WGS 84

Soil Map Unit Name: Wa NWI classification: S3K

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

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

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

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

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

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

WETS analysis indicates that antecedent precipitation conditions are in the normal range.

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (minimum of two required)

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

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✔ | Depth (inches): ____ |
| Water Table Present? | Yes ✔ | No ____ | Depth (inches): 8 |
| Saturation Present? (includes capillary fringe) | Yes ✔ | No ____ | Depth (inches): 5 |

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

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

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: P3

| Tree Stratum (Plot size: 30 ft r) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Populus tremuloides | 10 | ✔ | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 10% = Total Cover | | |
| **Sapling/Shrub Stratum** (Plot size: 15 ft r) | | | |
| 1. Cornus alba | 7 | ✔ | FACW |
| 2. Lonicera X bella | 1 | | FACU |
| 3. Rhamnus cathartica | 1 | | FAC |
| 4. Rosa multiflora | 1 | | FACU |
| 5. | | | |
| 6. Rosa multiflora | | | |
| 7. | | | |
| | 10% = Total Cover | | |
| **Herb Stratum** (Plot size: 5 ft r) | | | |
| 1. Impatiens capensis | 50 | ✔ | FACW |
| 2. Leersia oryzoides | 20 | ✔ | OBL |
| 3. Ribes americanum | 10 | | FACW |
| 4. Solanum dulcamara | 10 | | FAC |
| 5. Carex vulpinoidea | 7 | | OBL |
| 6. Phalaris arundinacea | 7 | | FACW |
| 7. Carex stipata | 5 | | OBL |
| 8. Rumex britannica | 5 | | OBL |
| 9. Epilobium coloratum | 3 | | OBL |
| 10. Persicaria sagittata | 3 | | OBL |
| 11. Rosa multiflora | 2 | | FACU |
| 12. Rhamnus cathartica | 1 | | FAC |
| | 123% = Total Cover | | |
| **Woody Vine Stratum** (Plot size: 30 ft r) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | 43 | x 1 = | 43 |
| FACW species | 74 | x 2 = | 148 |
| FAC species | 22 | x 3 = | 66 |
| FACU species | 4 | x 4 = | 16 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 143 (A) | | 273 (B) |

Prevalence Index = B/A = 1.9

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

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

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

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

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

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

Edge of shrub carr, no woody vines.

**SOIL**

Sampling Point: P3

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

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0 - 20 | 2.5Y 2.5/1 | 100 | | | | | Mucky Loam/Clay | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils[3]:**

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

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

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Dominie Property City/County: T Westport / Dane Co Sampling Date: 2020-07-10

Applicant/Owner: Shane Knickmeier State: Wisconsin Sampling Point: P4

Investigator(s): Eric C Parker - Heartland Ecological Group Section, Township, Range: Section 28, T8N, R9E

Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): None Slope (%): 0 - 1

Subregion (LRR or MLRA): L 95B Lat: 43 Long: -88 Datum: WGS 84

Soil Map Unit Name: Houghton muck (Ho) NWI classification: None depicted

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

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

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

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

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

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

WETS Analysis indicates antecedent precipitation conditions are in the normal range. Although wetland hydrology is met due to a dry-season water table, vegetation consists of planted turf grasses and weeds. Professional judgement used to determine this sample point is an upland.

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (minimum of two required)

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

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No ✔ | Depth (inches): ____ |
| Water Table Present? | Yes ✔ | No ____ | Depth (inches): 18 |
| Saturation Present? (includes capillary fringe) | Yes ✔ | No ____ | Depth (inches): 16 |

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

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

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: P4

| Tree Stratum (Plot size: 30 ft r) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | = Total Cover | | |
| **Sapling/Shrub Stratum** (Plot size: 15 ft r) | | | |
| 1. Juglans nigra | 3 | ✔ | FACU |
| 2. Cornus alba | 2 | ✔ | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 5% = Total Cover | | |
| **Herb Stratum** (Plot size: 5 ft r) | | | |
| 1. Agrostis stolonifera | 50 | ✔ | FACW |
| 2. Viola sororia | 25 | ✔ | FAC |
| 3. Erigeron strigosus | 10 | | FACU |
| 4. Poa pratensis | 10 | | FACU |
| 5. Taraxacum officinale | 10 | | FACU |
| 6. Daucus carota | 7 | | UPL |
| 7. Glechoma hederacea | 5 | | FACU |
| 8. Cirsium vulgare | 3 | | FACU |
| 9. Symphyotrichum lateriflorum | 3 | | FAC |
| 10. Rumex crispus | 2 | | FAC |
| 11. | | | |
| 12. | | | |
| | 125% = Total Cover | | |
| **Woody Vine Stratum** (Plot size: 30 ft r) | | | |
| 1. Vitis riparia | 2 | | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | 2% = Total Cover | | |

**Dominance Test worksheet:**

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 52 | x 2 = | 104 |
| FAC species | 32 | x 3 = | 96 |
| FACU species | 41 | x 4 = | 164 |
| UPL species | 7 | x 5 = | 35 |
| Column Totals: | 132 (A) | | 399 (B) |

Prevalence Index = B/A = 3.0

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

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

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

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

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

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

Weed community

**SOIL**

Sampling Point: P4

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0 - 9 | 2.5Y 3/2 | 100 | | | | | Sandy loam | |
| 9 - 19 | 10YR 6/4 | 95 | 10YR 6/6 | 5 | C | M | Sandy loam | Has 20% gravel |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |
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| - | | | | | | | | |
| - | | | | | | | | |
| - | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils[3]:**

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

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

**Restrictive Layer (if observed):**

Type: Gravel

Depth (inches): 19

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

Remarks:

Auger refusal at 19 inches

Shane Knickmeier
Dominie Property
Project #: 20200342
July 27, 2020

# Appendix D | Site Photographs


**Photo #1** Sample point P1


**Photo #2** Sample point P1


**Photo #3** Sample point P1


**Photo #4** Sample point P1


**Photo #5** Sample point P2


**Photo #6** Sample point P2


**Photo #7** Sample point P2


**Photo #8** Sample point P2


**Photo #9** Sample point P3

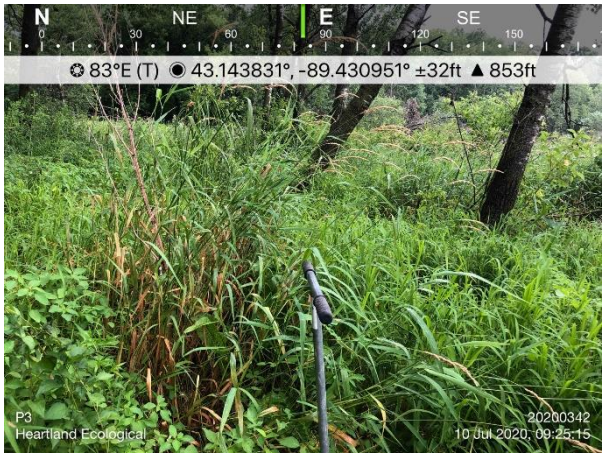


**Photo #10** Sample point P3


**Photo #11** Sample point P3


**Photo #12** Sample point P3


**Photo #13** Sample point P4


**Photo #14** Sample point P4


**Photo #15** Sample point P4


**Photo #16** Sample point P4


**Photo #17** Disturbed Uplands.


**Photo #18** W-1 Shrub Carr Edge and Open Water.


**Photo #19** Wetland Boundary Along Slope.

Shane Knickmeier
Dominie Property
Project #: 20200342
July 27, 2020

# Appendix E | Delineator Qualifications

# Eric C. Parker, PWS

Principal Scientist
eric@heartlandecological.com
(414) 380-0269

Mr. Parker is a certified Professional Wetland Scientist and Professionally Assured Wetland Delineator in Wisconsin with over 30 years of experience assisting public and private clientele. He has completed wetland projects in other states including IL, IN, OH, MI, ND, MO, PA, TX, MD, VA, and NC. His work has supported thousands of institutional, commercial, utility, residential, industrial & transportation projects. Mr. Parker's natural resource specialties include botanical surveys, wetland science, restoration and mitigation, and environmental corridor mapping. He has a widespread understanding of the scientific, technical and regulatory aspects of natural resources projects. His interests also include floristic quality assessment (FQA) and wetness categorization of plant species.

Mr. Parker's experience includes the following: Botanical / Biological Surveys and Natural Resource Inventories; Rare Species Surveys, Conservation Plans and Monitoring; Wetland Determination, Delineation and Functional Assessment; Environmental Corridor Determinations/Mapping; Wetland Restoration, Mitigation, Banking and Monitoring; Habitat Restoration, Wildlife Surveys, SCAT surveys, Environmental Assessments; Local, state, federal permit applications; Expert Witness testimony; and Regulatory permit compliance.

## Education

BS, Watershed Management, Soils Minor
University of Wisconsin - Stevens Point
Stevens Point, WI, 1983

Wetland Ecosystems (including delineation & assessment)
USEPA Graduate School
Washington DC, 1988

Field Oriented Wetland Delineation Course (1987 Corps Manual)
Wetlands Training Institute (WTI)
St. Paul, MN, 1994

Basic Wetland Delineation Training
Wisconsin Department of Administration
Waukesha, WI, 1997

Vegetation Description, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Advanced Wetland Delineation
University of Wisconsin - La Crosse
Bayfield County, WI, 2001

Environmental Corridors Training,
SEWRPC, Waukesha, WI, 2004

Critical Methods in Wetland Delineation
University of Wisconsin - La Crosse Continuing Education and Extension, Madison, WI, 2006, 2008, 2010, 2014, 2016, 2017, 2018, 2019, 2020

Mosses ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Sedges ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 2002, 2006, 2010

Grasses ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

## Registrations

Professional Wetland Scientist #838, Society of Wetland Scientists Certification Program

Certified Wetland Scientist #C-058
Stormwater Management Commission
Lake County, IL

Qualified Wetland Specialist #W-057
Kane County, Illinois

# Project Experience

## Wetland Delineation & Regulatory Support

Example 2019 Wetland Delineations in WI (39 sites)

*North Hills Subdivision, Waukesha Co., WI (Jan); Prairie Walk Subdivision, Waukesha Co., WI (Apr); Loomis Parcel Determination, WI (Mar-Apr); Lamminem Parcel, Kenosha Co., WI (Apr); Lot 103 Burlington, Racine Co., WI (Apr); 7220 Ryan Rd Parcel, Milwaukee Co., WI (Apr); 1-Acre Franklin Parcel, Milwaukee Co., WI (June); 256th Ave Site, Kenosha Co., WI (May); 915 Main St Mukwonago, Waukesha Co., WI (May); Muskego Lakes CC, Muskego, Waukesha Co., WI (June), Bonniwell Road Parcel, Ozaukee Co., WI (July); 333 Portland Rd Site, City of Waterloo, Jefferson Co., WI (May); Thompson Lane Parcel, Village of Chenequa, Waukesha Co., WI (May); Schmitz Redi-Mix Site, Village of Mt. Pleasant, Racine Co., WI (June); New Berlin Redi-Mix Site, City of New Berlin, Waukesha Co., WI (May); Elm Grove Road Basin, City of New Berlin, Waukesha Co., WI (May); Lathrop-Meacham Parcels Mitigation Site, Village of Mt. Pleasant, Racine Co., WI (May-July); Lot 18-31 Geneva National Site, Town of Geneva, Walworth Co., WI (July); Bohner's Lake Parcel, Town of Burlington, Racine Co., WI (Sept); 6970 South 6th St., City of Oak Creek, Milwaukee Co., WI (Aug); Weatherstone Meadows site, City of New Berlin, Waukesha Co., WI (Aug); Parkview Apartments site, Village of Somers, Kenosha Co., WI (Aug); Volkswagen Expansion site, Village of Pleasant Prairie, Kenosha Co., WI (Aug); Pewaukee-Brookfield Trail, Waukesha Co., WI (Aug-Sept); Parcel 1268-993, City of New Berlin, Waukesha Co., WI (Aug); Germantown Industrial Business Park, Washington Co., WI (Oct); Haasch-Finger site, City of Brookfield, Waukesha Co., WI (Oct); Kennedy Property, Village of Waunakee, Dane Co., WI (Oct); Jefferson County Interurban Trail, Towns of Watertown and Ixonia, Jefferson Co., WI (Oct); Mukwonago Residential Parcel, Village of Mukwonago, Waukesha Co., WI (Oct); Pine Ridge Estates, City of Oconomowoc, Waukesha Co., WI (Oct); Silver Lake Parcels, Village of Salem Lakes, Kenosha Co., WI (Oct); New Berlin Trail Phase II, City of Waukesha, Waukesha Co., WI (Oct); 1910 W Puetz Road site, City of Oak Creek, Milwaukee County, WI (Oct); Project Redline, Village of Menomonee Falls, WI (Oct); CSM 3232 Oulot 1, Village of Mt. Pleasant, Racine Co., WI (Oct); Plant Community Mapping and Assessment, City of Oak Creek, Milwaukee Co., WI (Nov); Faber Property, Village of Williams Bay, Walworth Co., WI (Nov); Campus Drive Property, Village of Hartland, Waukesha Co., WI (Dec).*

Example 2018 Wetland Delineations in WI and IL (50 sites)

*Homestead Acres, Racine Co., WI (Apr); Greenmeadows, Racine Co., WI (Apr), Wind Point School, Racine Co., WI (Apr); Vintage Parc East, Kenosha Co., WI (Apr); Nelson-Heckel, Kenosha Co., WI (Apr); Caledonia Storage, Racine Co., WI (Apr); New Berlin Storage, Waukesha Co., WI (Mar); Manke Gravel Pit, Columbia Co., WI (May); Drissel-Wallace, Kenosha Co., WI (May); LaBelle Golf Course, Waukesha Co., WI (May); Waterloo Aluminum, Jefferson Co., WI (May); Salem Business Park, Kenosha Co., WI (May); Audubon Arboretum, Racine Co., WI (May); Briarwood, Racine Co., WI (May); Basting-Brown Parcels, Waukesha Co., WI (May); 84-Acre Site, Racine Co., WI (May); Jolenta Lane, Waukesha Co., WI (Apr); Rock Road Storage, Walworth Co., WI (May); Wildwood Creek, Winnebago Co., WI (Jun); Green Bay Site, Brown Co., WI (Jun); Main Street Market, Kenosha Co., WI (Jul), Armstrong Eddy Park, Rock Co., WI (May), Hickory St Site, Ozaukee Co., WI (Jun), Parcel DW 800004, Walworth Co. (Jun); Lot 8 Parcel WCA-0003, Walworth Co., WI (Jun); RRR Grundy, Kane Co., IL (Jul); Coleman Norris Parcel, Waukesha Co., WI (Jul); Deaton Parcel, Kenosha Co., WI (Aug); Hintz Parcel, Washington Co., WI (Aug); Loomis-Ryan Rds Site, Milwaukee Co., WI (Aug); Grass Parcels, Waukesha Co., WI (Sep); Mallard Ridge Landfill Pipeline, Walworth Co., WI (Sep); Glacier Ridge Landfill Pipeline, Dodge Co., WI (Sep); Ravenwoods, Waukesha Co., WI (Aug); Canopy Hills, Racine Co., WI (Sep); Duck Pond, Kenosha Co., WI (Sep); Splinter Parcels, Racine Co., WI (Oct); Berget Parcel, Walworth Co., WI (Sep); Saylesville Rd Parcel, Waukesha Co., WI (Oct); Racine Ave-Lawnsdale Rd Parcel, Waukesha Co., WI (Oct); Braun Rd-90th St Parcel, Racine Co., WI (Oct); Grafton Parcels, Ozaukee Co., WI (Dec); Crawford Parcel, Racine Co., WI (Nov); Kotas Parcels, Racine Co., WI (Nov); Altamount Acres South, Racine Co., WI (Dec); Christina Estates, Racine Co., WI (Dec); Christina Estates NE, Racine Co., WI (Dec); Lathrop Parcel, Racine Co., WI (Dec); Hillside Ridge, Waukesha Co., WI (Dec); Stolz Property, Waukesha Co., WI (Dec).*

Example 2017 Wetland Delineations in WI, MI, IN, and IL (31 Sites)

*Back 40 Mine, Menominee Co., MI (Jan); Oakdale Rd Site, Waukesha Co., WI (Sep), Birds Eye Foods,*

*Walworth Co., WI (Sep); Boss Property, Leelanau Co., MI (Jul); Brighton Estates, Waukesha Co., WI (Sep); Saltzman North, Waukesha Co., WI (Sep); Susnar Parcel, Waukesha Co., WI (Sep); Wrenwood Site, Washington Co., WI; Chorneyko Site, Walworth Co., WI (Apr); CN Railroad Bridges-6 Sites, Fond du Lac & Winnebago Co's, WI; CN Railroad Freeport Culvert, Kane Co., IL (May); Herrling Site, Dane Co., WI (Sep); MMSD Sewerage Project, Milwaukee Co., WI (May); Spring St Site, Racine Co., WI (Oct); Goshen Midway Cell Tower, Elkhart Co., IN (Apr); Two Creeks Utility Site, Manitowoc Co., WI (Nov); Suncast Site, Kane Co., IL (Dec); Lot 51 Lakeview Corp Park, Kenosha Co., WI (Oct); Lakefront Gun Range, Racine Co., WI (Oct); WI Club Golf Course, Milwaukee Co., WI (Apr); WisDOT Improvements, STH 32 Racine Co (Aug), STH 67 Walworth Co. (Sep), STH 20, Racine Co. (Oct), 27th St, Milwaukee Co. (Sep); Conference Point Boat Launch, Walworth Co., WI (Oct); Lake View RR Corridor, Portage Co., WI (Sep).*

Example 2016 Wetland Delineations in WI, OH, MI and IL (Mostly Large Projects)
*AEP Wavery-Adams-Seaman 138 kV Trans. Line Rebuild, Adams & Pike Co's, OH (Dec); Kansas West-Faraday Trans. Line Rebuild-Macon, Moultrie, & Coles Co's, IL (Jan), Riveredge Nature Center Preliminary, Ozaukee Co., WI (Feb); Lost Creek Mitigation Site, Portage Co., WI (Jun); I-41 Burleigh to Good Hope Corridor WisDOT, Milwaukee Co., WI (Jul); STH 60 Corridor, Ozaukee & Washington Co's, WI (Aug–Oct); Erin Hills Golf Course, Washington Co., WI (Sep); Back 40 Mine, Menominee Co., MI; Lake Zurich SW Cell Tower, Lake Co., IL (Oct); Acme Steel Coke Site, Cook Co., IL (Dec).*

Example 2015 Wetland Delineations in WI, IL, and MO (Mostly Large Projects)
*Bolser Street MO33211-M Cell Tower Site, Grundy Co., MO (Sep); Section 9 Site, Dane Co., WI (Apr); Franzel Rd Site, Bayfield Co., WI (Apr); Big Eau Pleine Mitigation Site, Marathon Co., WI (Aug); Taylor Road Siding Track, Jackson Co., WI (Nov); UPS-CACH Site, Cook Co., IL (Jun); Eggers Woods Forest Preserve, Cook Co., IL (Mar).*

Example 2014 Wetland Delineations in WI, IL, and MI (Mostly Large Projects)
*Emerald Park Western Expansion, Waukesha Co., WI (Oct); Arcadia Mining Site-Trempealeau Co., WI (Apr); Kalamazoo River Parcel, Kalamazoo and Calhoun Co's, MI (Jul); G2 Mitigation Site - Winnebago Co., WI (May); Line 6A MP 378.94, McHenry Co., IL (Sep); Geneva National Site, Walworth Co., WI (Nov); Nortrax Site -Lincoln Co., WI (Oct); Toberman Parcel- Crawford Co., WI (Oct).*

Example 2013 Wetland Delineations in WI, IL, OH, and MI (Mostly Large Projects)
*West Central Lateral - Eau Claire, Clark, Jackson & Monroe Co's, WI (Apr-May); Walker Cranberry 80-acre Parcel – Jackson Co., WI (Sept - Oct); Berne to Natrium Pipeline, Monroe Co., OH (Oct); CNX Noble Pipeline – Noble Co., OH (Oct); Deer Grove Forest Preserve, Cook Co., IL (Nov).*

Example 2012 Wetland Delineations in WI, IL, IN, and TX (Mostly Large Projects)
*West Central Lateral (190 miles), Eau Claire, Clark, Jackson & Monroe Co's, WI (Sep-Nov); Morrison Creek Cranberry Parcel, Jackson Co., WI (Aug); London Mitigation Site, Jefferson Co., WI (July); Southern Access Pipeline, Sawyer & Washburn Co's, WI (Jun); I-80 Interchange, LaPorte Co., IN (Mar); Eagle-Ford Shale Plays, LaSalle & McMullen Co's, TX (Jan-Feb).*

I-94 Corridor Wetland and Primary Environmental Corridor Mapping and Endangered Species Study, Milwaukee, Racine, and Kenosha Counties, WI (Project Manager and Lead Scientist)

Primary Environmental Corridor Delineation Parkview Site, Village of Somers, WI (Lead Scientist)

Elm Road Generating Station, Oak Creek & Caledonia, WI (Project Manager & Lead Scientist)

Tri-State Tollway, Deerfield Plaza Wetland and Endangered Species Investigation, Lake and Cook Counties, IL (Lead Scientist)

Guardian II Laterals, Fox Valley, Hartford and West Bend, WI (Project Manager and Lead Scientist)

ATC Paris to St. Martins (KK3025) 138KV Line Rebuild, Kenosha, Racine and Milwaukee Counties, WI (Project Manager and Lead Scientist)

**State of Wisconsin**
**DEPARTMENT OF NATURAL RESOURCES**
**1300 W Clairemont Avenue**
**Eau Claire, WI 54701**

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

March 19, 2020

Eric Parker
Heartland Ecological Group, Inc.
4821 Elm Island Circle, Waterford, WI 53185

Subject: 2020 Assured Wetland Delineator Confirmation

Mr. Parker,

This letter provides Wisconsin Department of Natural Resources (WDNR) confirmation for the wetland delineations you conduct during the 2020 growing season. You and your clients will not need to wait for the WDNR to review your wetland delineations before moving forward with project planning. This will help expedite the review process for WDNR's wetland regulatory program. Your name and contact information will continue to be listed on our website at: http://dnr.wi.gov/topic/wetlands/assurance.html.

In the instance where a municipality may require a letter of confirmation for your work prior to moving forward in the local regulatory process, this letter shall serve as that confirmation. Although your wetland delineations do not require WDNR field review, inclusion of a Wetland Delineation Report is required for projects needing State authorized wetland, waterway and/or storm water permit approvals.

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

Sincerely,

Kara Brooks
Wetland Identification Coordinator
Bureau of Watershed Management