Heartland
ECOLOGICAL GROUP INC
506 Springdale Street, Mount Horeb, WI 53572

September 26, 2022

Hans Hilbert
Dane County Zoning Administration
City County Building, Room 116
210 Martin Luther King Jr. Blvd.
Madison, WI 53703
Hilbert.hans@countyofdane.com
(608) 266-4993

RE: Application of Zoning Variance, Holty Property Building, Town of Albion, Dane County

Dear Mr. Hilbert:

In compliance with a Variance Application with Dane County Planning and Development Division of Zoning, the Assigned Agent Heartland Ecological Group ("Heartland") presents this narrative on behalf of Dan Holty (the "Owner") for a partially constructed storage shed located on the Owner's parcel in the northwest quarter of Section 36, T5N, R12E, Town of Albion Dane County (Attachment 1- Project Location). Due to the unique nature of wetlands, floodplain, and proximity to Lake Koshkonong, strict adherence to Dane County Code of Ordinances Chapter 11- Shoreland, Shoreland-Wetland, and Inland-Wetland, would result in the storage shed in question not being able to be finished. The loss of this storage shed provides a unique hardship for the Owner, and since the shed poses no harm to public interests and lies within the footprint of a recently demolished shed the Owner is asking for a variance of 59ft from the standard 75 ft shoreland wetland setback to be granted for the shed's footprint. This new shed footprint would be located approximately 16 ft from the wetland boundary, and the location was chosen for its utilization of portions of the original accessory building footprint- thus minimizing impacts to the rest of the property where a variance would be required regardless.

BACKGROUND

The parcel in question is zoned for RM-16 (Rural Mixed Use) with permitted uses including residential accessory structures, seasonal storage of recreational equipment, and undeveloped natural resources/open space areas. The structure that would be subject to this variance is an accessory structure consisting of single story shed on an at-grade concrete slab with a singular purpose of storing recreational equipment for use on the property (Attachment 2- Floor Plans). Prior to the acquisition of the property, an existing nonconforming accessory structure (storage shed) was present on the parcel that lied within the 75 ft wetland setback zone. This historic structure was deemed structurally unsafe for the storage of equipment and for the safety of the owner which resulted in wood rot and other structural failures. As a result, the former accessary structure was demolished. The Owner began construction of a replacement accessory

structure, with an approximately 40 ft. x 40 ft. footprint within the same location of the demolished structure which also lied within the shoreland wetland setback. Dane County issued a stop work order before the construction of the structure was completed. The building currently has an at-grade slab concrete foundation with in-floor heating and is framed-out with wood framing. Since Dane County issued a stop work order, the owner was not able to roof or enclose the structure (i.e. it is covered in plastic wrap) and it is currently at risk of weathering.

In 2021, Combs & Associates delineated a wetland boundary near the new building footprint, and this wetland boundary was used to delineate the 75 ft shoreland wetland setback area (Attachment 7 – Wetland Delineation Report). The footprint of the former accessory building and new accessory building, as well as the 2021 delineated wetland boundary and the 75 ft wetland and Lake Koshkonong Ordinary High Water Mark (OHWM) setback zones, may be found on Attachment 3- Shed Placement Map. Photos of the building taken during a site visit to the property on August 5, 2022 may be found in Attachment 4- Site Photographs.

1. DESIGN ALTERNATIVES

Three (3) design alternative were considered in order to comply with Dane Co. Code of Ordinance Chapter 11. Ultimately, the owner seeks to retain the existing footprint which is located 16 ft from the delineated wetland boundary. This would require a variance of 59 ft from the 75 ft wetland setback. This footprint also utilizes the footprint of the historic shed which also limits impacts to the rest of the property by utilizing historically graded/improved area.

A. Keep Existing Shed and Do Not Build

This design alternative would have kept the existing shed on the property and would not have erected any new structure. This design alternative was deemed unfeasible, due to the poor structural integrity of the former accessory building which would pose a safety risk to the owner and his family. The building was demolished to eliminate the safety concerns, and the owner was not aware that removal of the structure would prohibit him from rebuilding a replacement structure within the same location.

Move The Location of the New Shed East

The second alternative considered moving the location of the building directly east and out of the 75 ft wetland and OHWM setback zones. However, because wetlands surround the entire parcel, wetland setbacks are a limiting factor throughout the upland portions of the parcel. In addition, upland areas east of the existing footprint, are also limited by the 75 ft setback from the ordinary high-water mark (OHWM) of Lake Koshkonong and from the unnamed tributary on the northern portion of the parcel. Furthermore, floodplain is mapped throughout most of the parcel (Attachment 5- FEMA Floodplain Map), and the areas north and east of the existing footprint lie within the mapped floodway, further limiting the use of those locations for structures. The current location of the accessory structure avoids the mapped floodway and keeps the building site in the same location as the previous structure, minimizing land disturbance. In

summary, there are no upland locations within the parcel that are outside of wetland and waterway setbacks that are suitable to support the accessory building.

B. Reduce the New Shed Building Footprint and Move the Shed East

The third alternative was to reduce the new building footprint to the old 25 ft by 19 ft building footprint. This design alternative was deemed insufficient as a reduction in square footage would have caused an unnecessary hardship for the owner. The 25 ft by 19 ft dimensions of a shed pose a limitation to recreational property use on the property, as the dimensions provide inadequate seasonal storage of recreational vehicles and equipment. Regardless of the structure size, the structure would still require a variance from shoreland wetland setbacks and would not relieve the owner from obtaining this variance.

2. UNNECESSARY HARDSHIP

Compliance with Dane Co. Chap. 11 wetland setbacks would result in unnecessary hardship which would prevent the property owner from utilizing the property for recreational purposes. Compliance would also result in the loss of an existing accessory structure that needed to be removed due to safety issues. A variance from the 75 ft wetland setback, in order for the new accessory building footprint to stay in its current location, would provide reasonable recreational use of the property. Without it, the owner would not be able to seasonally store recreational equipment properly which is a permitted use of the property in question.

3. PHYSICAL CHARACTERISTICS OF THE PROPERTY

The property in question provides unique physical limitations due to the location of wetlands, floodplain, an unnamed tributary, and proximity to Lake Koshkonong. As depicted in Attachment 6- Limitations to Structure Siting Map, the property has a 75 ft wetland setback and a 75 ft setback from Lake Koshkonong which overlap. The nature of these two setbacks, in addition to floodplain limitations, essentially eliminates an appropriate building location in an upland area. The owner desires to avoid direct wetland impacts through filling to create a building site. By utilizing the existing upland building location, environmental impacts are subsequently minimized.

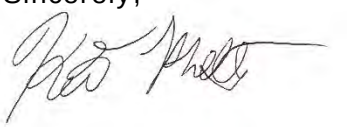
4. EFFECTS OF A GRANTED VARIANCE

If a variance is granted for the property, the effects of it would be negligible on the public interest. The new accessory building footprint utilizes portions of the old accessory building footprint that had been in place for decades, thus minimizing land disturbance in the area and avoiding impacting other portions of the parcel that have not otherwise been impacted. Additionally, the new building location is located 16ft. from the wetland and thus no wetland disturbance within the boundaries of existing wetlands is being proposed. Since this new shed is a single-story feature with an approximate 15ft. height and 40ft. x 40ft. footprint, the shed is also a low impact construction. The proposed shed is not a livable space, and its only function is to store seasonal recreational equipment for the property.

The wetland area near the accessory structure does not support rare or high-quality wetland types, rather it is dominated by non-native invasive plant species, primarily reed canary grass. The forested component of the wetland consists of a canopy of green ash trees, which have been terminated by the emerald ash borer. Therefore, there are no direct or significant secondary wetland impacts that would result from granting this variance request.

Please contact me if you have any questions regarding this Dane County Application of Variance.

Sincerely,

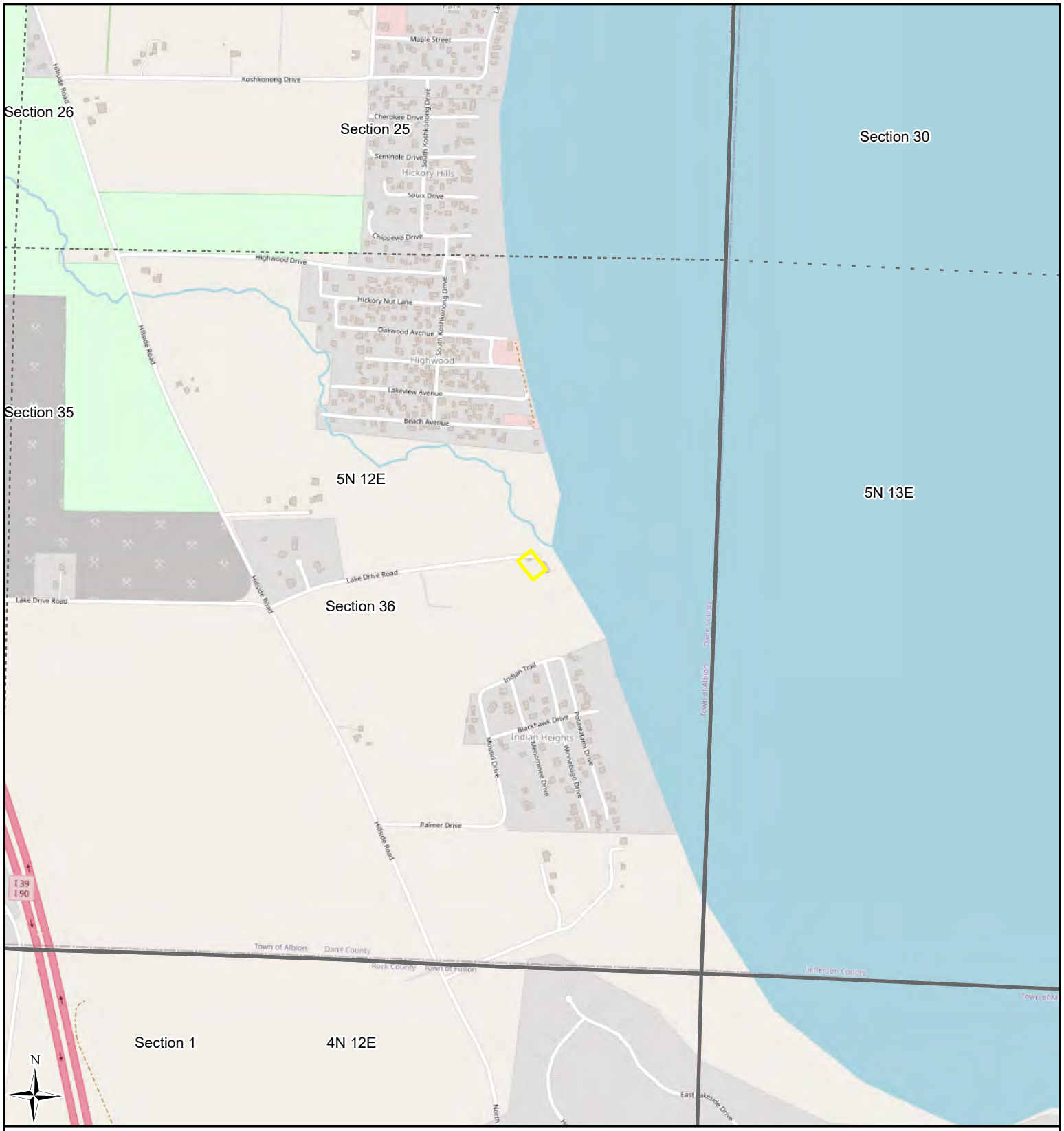


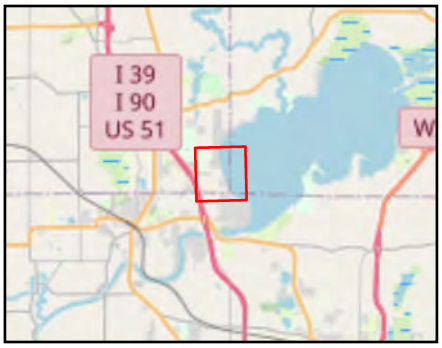
Keith Phelps, Environmental Technician
Heartland Ecological Group, Inc.
keith@heartlandecological.com
608.490.2450 Ext. 7

Attachments:

1. Figure 1. Project Location Map
2. Floor Plans
3. Figure 2. Shed Placement Map
4. Site Photographs
5. FEMA Floodplain Map
6. Figure 3. Limitations to Structure Siting Map
7. Wetland Delineation Report

Attachment 1 | Figure 1. Project Location Map





Study Area (0.54 ac)

Township

Section

0 500 1,000 Ft

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Figure 1. Project Location

Holty Property
Project #20220820
T5N, R12E, S36
T Albion, Dane Co

OpenStreetMap
ESRI

LRR: NCNE

Dan Holty
Holty Property
Project #: 20220820
September 28, 2022

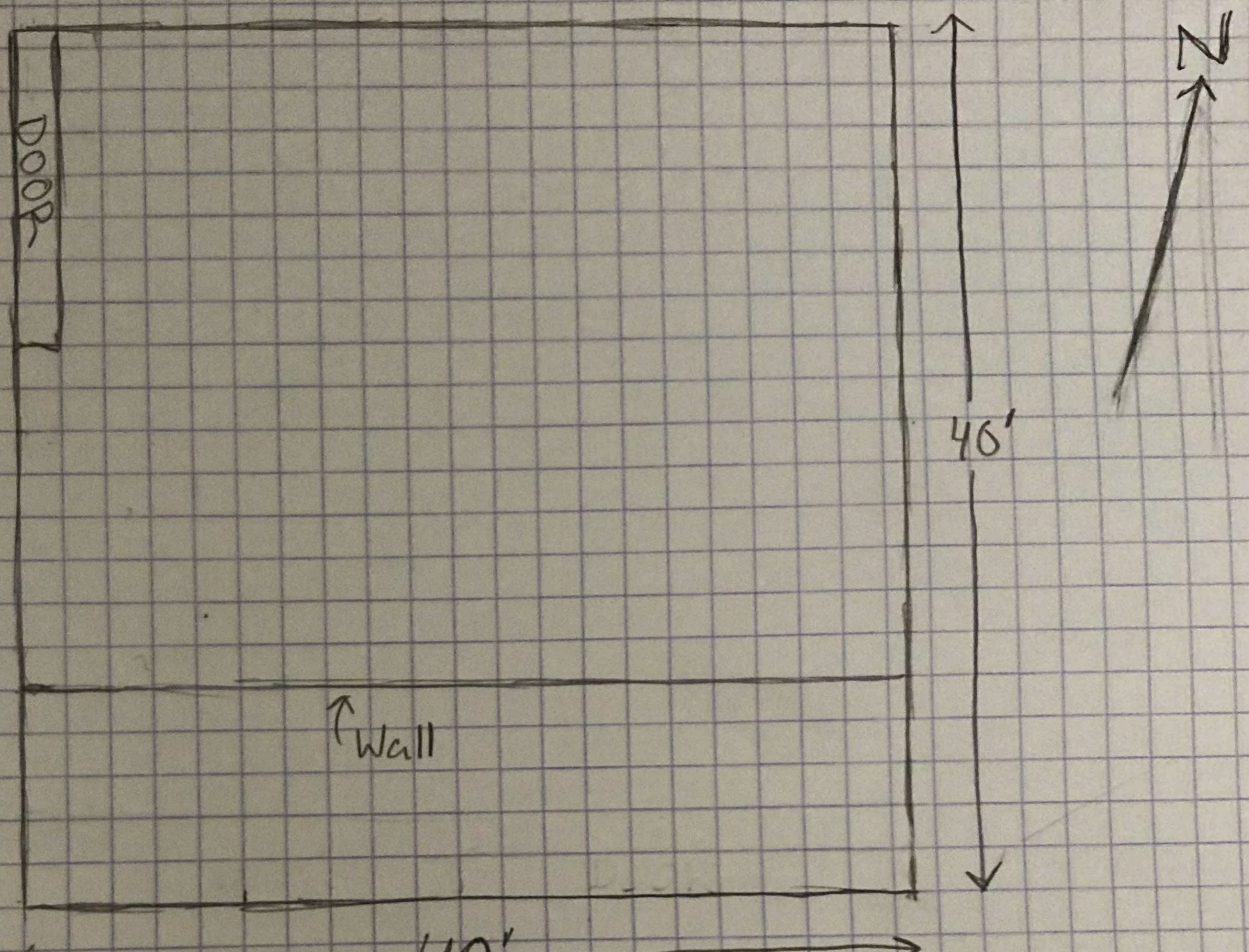
Attachment 2 | Floor Plans

Holly Property Shed Plan

Floor Plan:

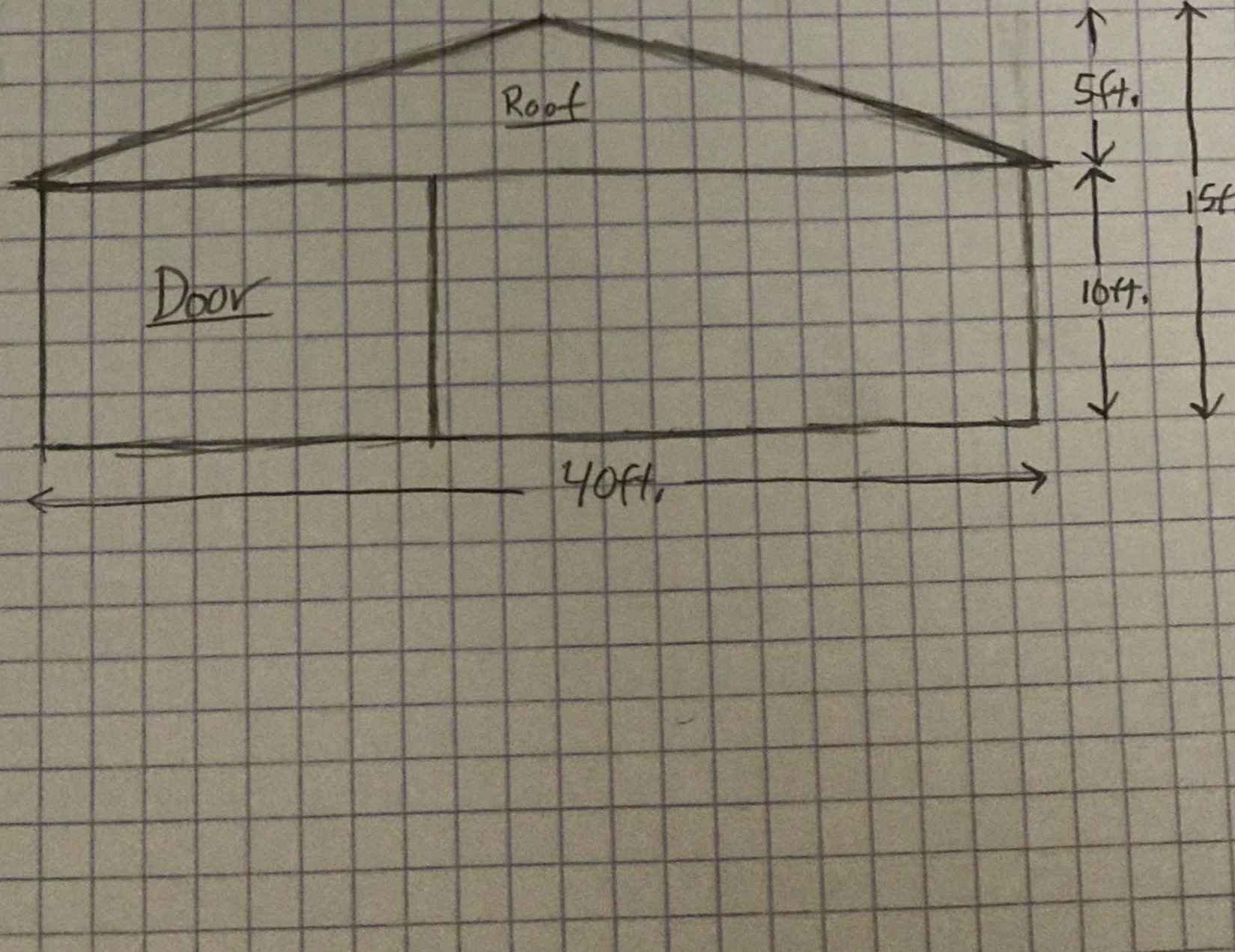
Scale: 1 inch = 10 ft.

Notes: Shed is intended for recreational storage equipment. Single story feature with no stairs.

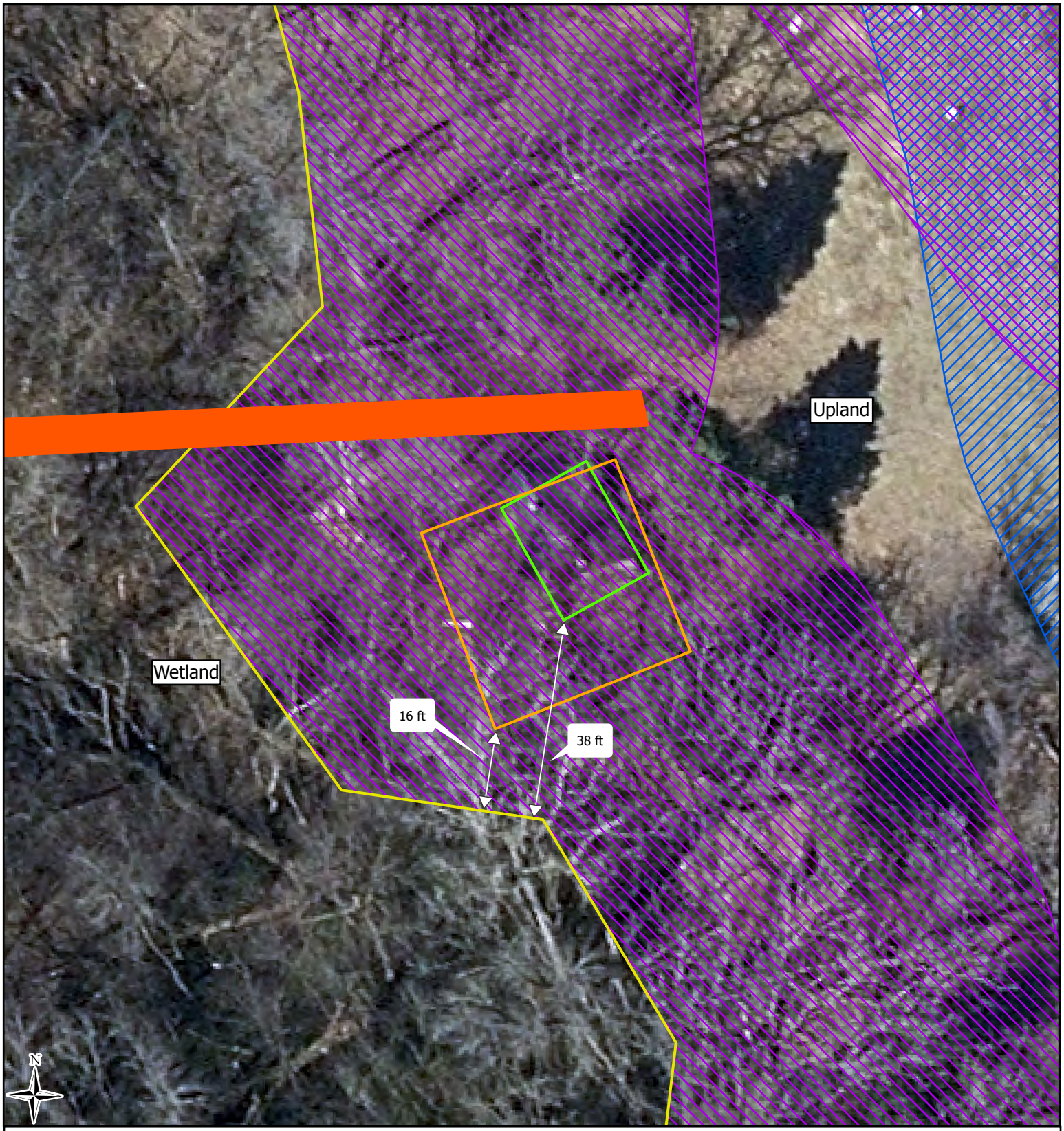


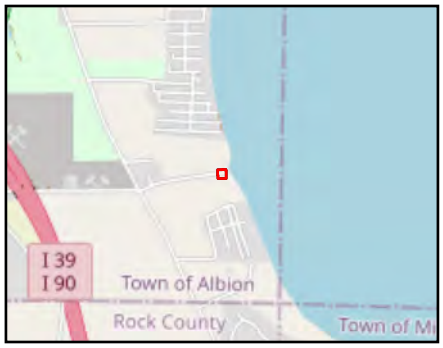
Front View: (Proposed)

Scale: 1 inch = 10 ft.



Attachment 3 | Figure 2. Shed Placement Map





Building Footprint

Old Shed Footprint

Gravel Driveway

Wetland Boundary (Combs & Associates 2021)

75ft Wetland Setback

75ft OHWM Setback

0 50 Ft

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Fig. 2 Shed Setback Map

Holty Property
Project #20220820
T5N, R12E, S36
T Albion, Dane Co

2017 Dane Co Orthophoto
Dane Co, Combs & Assoc. 2021

LRR: NCNE

Attachment 4 | Site Photographs

Photo #1 Photo of unfinished building on property

Photo #2 Photo of unfinished building on property- south view

Photo #3 Photo of unfinished building on property- southwest view

Photo #4 Photo of unfinished building on property- west view

Photo #5 Photo of unfinished building on property- south view

Photo #6 Photo of unfinished building on property- southwest corner

Photo #7 Photo of unfinished building on property- west view

Photo #8 Photo of unfinished building on property- northwest view

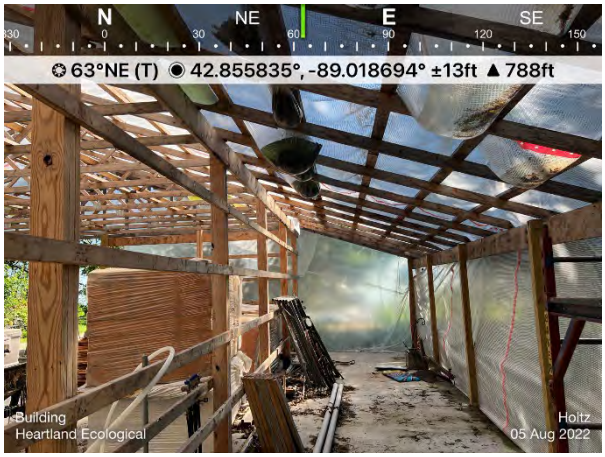


Photo #9 Photo of building's interior

Photo #10 Photo of wetland adjacent to building (1 of 4)

Photo #11 Photo of wetland adjacent to building (2 of 4)

Photo #12 Photo of wetland adjacent to building (3 of 4)

Photo #13 Photo of wetland adjacent to building (4 of 4)

Attachment 5 | FEMA Floodplain Map

National Flood Hazard Layer FIRMette

89°1'23"W 42°51'30"N

89°0'46"W 42°51'3"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

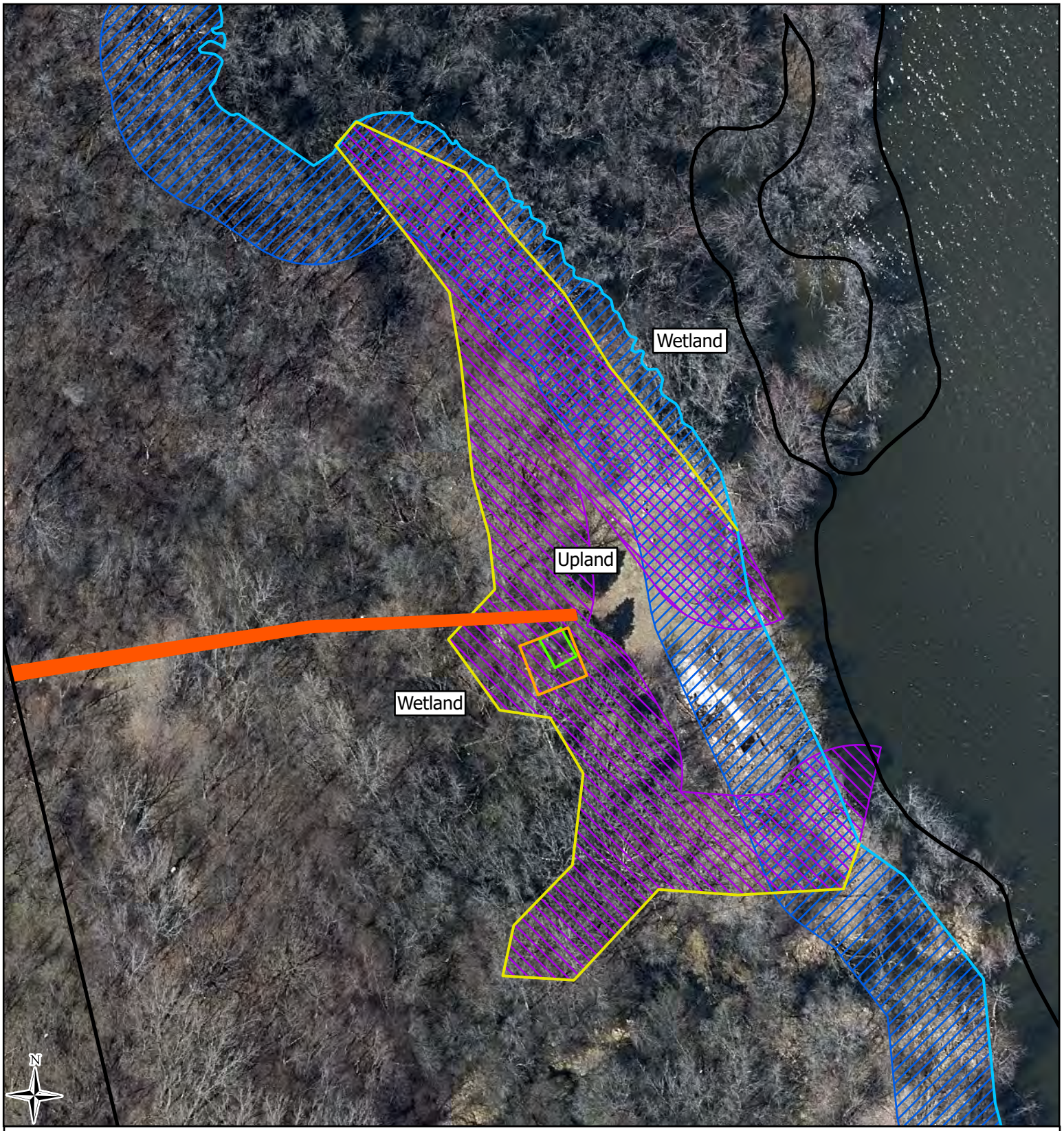
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/28/2022 at 10:47 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment 6 | Figure 3. Limitations to Structure Siting Map



Holty Parcel (20.94 ac)
Building Footprint
Old Shed Footprint
Gravel Driveway
Wetland Boundary (Combs & Associates 2021)
Approx. Lake Koshkonong OHWM
75ft Wetland Setback
75ft OHWM Setback

0 100 Ft

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Fig. 3 Limitations to Structure Siting

Holty Property
Project #20220820
T5N, R12E, S36
T Albion, Dane Co

2017 Dane Co Orthophoto
Dane Co, Combs & Assoc. 2021

LRR: NCNE

Dan Holty
Holty Property
Project #: 20220820
September 28, 2022

Attachment 7 | Wetland Delineation Report

Wetland Delineation Report

Dan Holty

Town of Albion
Dane County, WI

Combs and Associates Project No. 121-522a

September 16, 2021

Prepared for:
Dan Holty
136 Lake Drive
Edgerton, WI 53534

Prepared by:
Combs and Associates
Andrew Jegerlehner
Project Manager
109 W Milwaukee St.
Janesville, WI 53548
(608)752-0575

TABLE OF CONTENTS

1.0 INTRODUCTION

Combs and Associates performed a wetland determination and delineation on parcel 002/0512-361-9000-1, in the Town of Albion, Dane County, Wisconsin. The area of interest on the property is approximately 5.5 acres in size and located in Section 36, Township 5 North, Range 12 East, Town of Albion, Dane County, Wisconsin.

The purpose and objective of the delineation was to identify the southern extent of wetlands on the south end of the property. The wetland delineation was completed by Andrew Jegerlehner of Combs and Associates on September 15, 2021. The boundary of a forested wetland was delineated.

2.0 Qualifications

Combs and Associates provides surveying, land planning, engineering, and wetland delineation for clients in Southern Wisconsin.

Andrew Jegerlehner was the technical lead and author on this delineation project. Andrew has a B.S. degree in Aquatic Biology from St. Cloud State University, A Master's Certificate of Professional Development in Horticulture from the University of Illinois. He has over 15 years of experience in the natural resources field including: wetland restoration, wetland delineation, vegetation surveying, soil investigations, and aquatic habitat management. He has completed both the Basic and Advanced Wetland Delineation courses (2019) offered by the University of Wisconsin La Crosse, as well as courses pertaining to Hydric Soils for wetland delineation and Hydrology tools for Wetland Restoration. Andrew is working on becoming assured through the Wisconsin Department of Natural Resources - Wetland Delineation Professional Assurance Program. The goal of this program is to provide a high level of certainty about wetland boundaries for project planning, and save time in state review of wetland boundaries, while enhancing protection for Wisconsin's wetlands through more accurate identification of wetland boundaries overall. Therefore, concurrence from the WDNR for this wetland delineation is required for purposes of waterway and wetland permit applications, shoreland-wetland zoning, and/or other state-mandated local wetland programs.

3.0 Methods

The wetland delineation consisted of a desktop review of maps, climatic data, and historical data followed by a site visit on September 15th 2021 to document field conditions. The wetland determination involved the use of available resources to assist in the assessment such as USGS topographic maps, Natural Resources Conservation Service (NRCS) soil survey, Wisconsin Wetland Inventory (WWI) mapping and aerial photography. The presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soil indicators were documented using methodology defined in the *US Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual, regional supplement of the 1987 Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regions* (USACE ERDC, 2012). See References section for a complete list of guidance sources utilized.

On-site wetland determinations were made using the three criteria (vegetation, soil and hydrology) and technical approach defined in the USACE 1987 Manual. According to procedures described in the 1987 Manual, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

The uppermost wetland boundary was identified with consecutively numbered delineation flagging. The wetland boundary was surveyed with a Survey grade Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Civil 3D software. Subject to weathering, the flagging will remain in the field for use during a USACE / WDNR site review.

3.1 Vegetation

At the sampling points, herbaceous, shrub, tree, and vine strata were measured using 5', 15', and 30' radius plots. Percent cover was visually estimated within the plots, and dominant species were determined by applying the 50/20 Rule and /or Prevalence Index. *The National Wetland Plant List: 2016 wetland ratings* (Lichvar, et al., 2016) was used to determine the wetland indicator status of the observed vegetation.

3.2 Hydrology

The nearest available Natural Resource Conservation Service (NRCS) WETS Table and the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) Advanced Hydrologic Prediction Service (AHPS) 90-day Percent of Normal Precipitation Map were analyzed to determine the antecedent hydrologic condition of the Study Area. Inundation, water table, and/or saturation were measured at the sampling points, if present. Soil pits were generally left open for at least one half hour to one hour prior to measurement to allow for the normalization of the water level, if any. Primary and secondary indicators of wetland hydrology were investigated and if present were noted on the data sheets.

3.3 Soils

At the sampling points, a soil pit was excavated to a depth of at least 18-24 inches (36 inches during dry season, where possible. The color and texture of the soil matrix and associated mottling or concentrations were recorded for each observed soil layer within the pit. The Munsell Soil Color Book was used to determine the color of observed moist soils. The soil was analyzed for hydric soil characteristics and, if met, hydric soil(s) was/were indicated on the data sheets.

3.4 SOURCES REVIEWED

The Dane County GIS Website mapping application (Appendix 1, Figure 1), a one-foot contour map (Appendix 1, Figure 3), Wisconsin DNR Surface Water Data viewer (SWDV) (Appendix 1, Figure 4), a NRCS Web Soil Survey soils map and table (Appendix 1, Figure 5 and Appendix 2), aerial photos from the years 1995-2020 Appendix 1, Figures 6A-D), and a NOAA 30-day percent of normal precipitation map (Appendix 1, Figure 7) were reviewed prior to the wetland delineation in order to gain familiarity with the site's topography, wetland history, soils, and past land uses.

4.0 RESULTS

4.1 EXISTING ENVIRONMENTAL MAPPING

The topographic/site location map shows the Study Area is elevated area with Lake Koshkonong to the South and lower wetland areas to the East South and North. The contour map indicates elevations within the Study Area range from 779 feet to 785 feet.

The SWDV map indicates Maximum extent Wetland Indicators and mapped wetlands within the Study Area.

The NRCS soil map shows 3 mapped soil types within the Study Area: Boyer sand loam (WI nonhydric); Hayfield silt loam (predominately nonhydric with inclusions) and Marshan silt loam (hydric)

Based on a review of aerial photographs from the 1980's to 2020, the Study Area has been remained undisturbed. A road (continuation of Lake Dr) comes from the north and dead ends at the study area.

4.2 ANTECEDENT HYDROLOGIC CONDITION

Based on the WETS Analysis Worksheet in Appendix 3, precipitation was normal for the months of June-August. The NOAA AHPS precipitation map indicates the Study Area was within 100% of normal precipitation in the 30 days before the site visit, which is considered normal. The antecedent hydrologic condition of the site was considered normal for the time of year based on professional judgement.

4.3 FIELD INVESTIGATION

The main area that we focused on was the 5.5 acre area surrounding the existing building foundations near the shore of the lake. This area had a great deal of sand on the surface and is within the floodplain of the lake. To the best of our knowledge, there was no prior agency consultation or wetland delineation for this Study Area. A total of 6 sampling points were examined and the boundary of one wetland feature was delineated within the Study Area: a forested wetland that connects to Lake Koshkonong. A Trimble R10 Rover with a TSC3 data collector survey grade GPS unit with sub-meter accuracy was used to locate the wetland boundary and sampling points. Cursory sampling points in both upland and wetland areas were sampled in the field to determine the wetland boundaries. Data sheets were compiled and are included in Appendix 5.

4.3.1 UPLANDS

The uplands within the Study Area contained a turfgrass mix along with annual weeds and upland trees. This area is 3-5 feet higher in elevation that the delineated wetland area. Plants included Burr Oak, Northern Catalpa, Grapevine, black raspberry, crabgrass and common ragweed. It was very sandy. There are no hydrology indicators, hydric soil indicators, and some FAC plants in the upland areas

4.3.2 WETLANDS

The delineated wetland is a forested wetland that that starts at the lake on the East end and continues around the area of interest to the north and connects back to the lake on the west side of the area of interest. Point 2 and point 5 were taken at the wetland/upland transition. The wetland boundary closely coincides with the mapped wetland on the SWDV site.

Hydrophytic vegetation was present within the wetland and was dominated by Pink Smartweed (Polygynum pennsylvanicum). False Nettle (Boehmeria cylindrica) , Common Boneset (Eupatorium perfoliatum), and Eastern Cotton Wood.
The wetland is a lowland forested floodplain wetland with an approximate elevation of 779 at the boundary of the wetland. Saturation was found with 6" of the surface and the water table was 12"-18" below the surface.

The wetland was mapped as Hayfield and Marshan silt loam. There a 6" dirty sandy loam layer (10yr 3/1) followed by a layer from 6-18"" that was a silt loam with 10yr 2/1 with redox concentrations of 5% at 10yr /6. There was a muck close to the surface in lower lying areas.

5.0 CONCLUSION

Based on the wetland delineation completed by Combs and Associates, one wetland feature was identified within the Study Area: a forested wetland.

Wetland Boundary

The wetland boundary was determined based on distinct differences in vegetation, hydrology, soils and topography consisting of the following: 1) Transition from an upland turfgrass community with upland volunteer plants and Burr Oak trees to a community dominated by Pink Smartweed, False Nettle, and Reed Canarygrass. 2) Transition in geomorphic location from a higher elevation to lower elevation and 3) Transition from hydric soils to non-hydric soils. The transition from wetland to upland characteristics generally correlated with a topographic break round 779'. This elevation is below the ordinary high water mark.

6.0 Other Environmental Considerations

This report is limited to the identification of state and/or federally regulated wetlands within the Property. However, there may be other regulated environmental features within the Property, including but not limited to, historical or archeological features, endangered or threatened species, navigable waters and/or floodplains, etc. Federal, state, and local units of government and regional planning organizations may have regulatory authority to control or restrict land uses within or in close proximity to these features

Specifically, in the state of Wisconsin, Wis. Adm. Code NR 151.12 requires that a "protective area" or buffer be determined from the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands. This Wetland is a forested wetland. The jurisdictional authority on wetland buffers rests with the WDNR. The local unit of government and/or regional planning organization may have more restrictive buffers from wetlands than that imposed under NR 151.

The USACE has regulatory authority over waters of the U.S. including adjacent wetlands, and the WDNR has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapter 30 Wisconsin State Statutes, Act 6, and NR 103 Wisconsin Administrative Code. Local jurisdictions may have additional regulatory authority through shoreland or wetland zoning ordinances.

Prior to beginning work at this site or disturbing or altering wetlands, waterways, or adjacent lands in any way, Combs and Associates recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regard to the proposed work to comply with applicable regulations.

The information provided by Combs and Associates regarding wetland boundaries is a scientific-based analysis of the wetland and upland conditions present on the site at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland boundaries rests with the USACE and, in some cases, the WDNR or a local unit of government. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to recent precipitation patterns and the season of the year. In addition, the physical characteristics of the site can change over time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site.

7.0 References

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Combs & Associates

Dane County Map

September 16, 2021

Dane County Mask

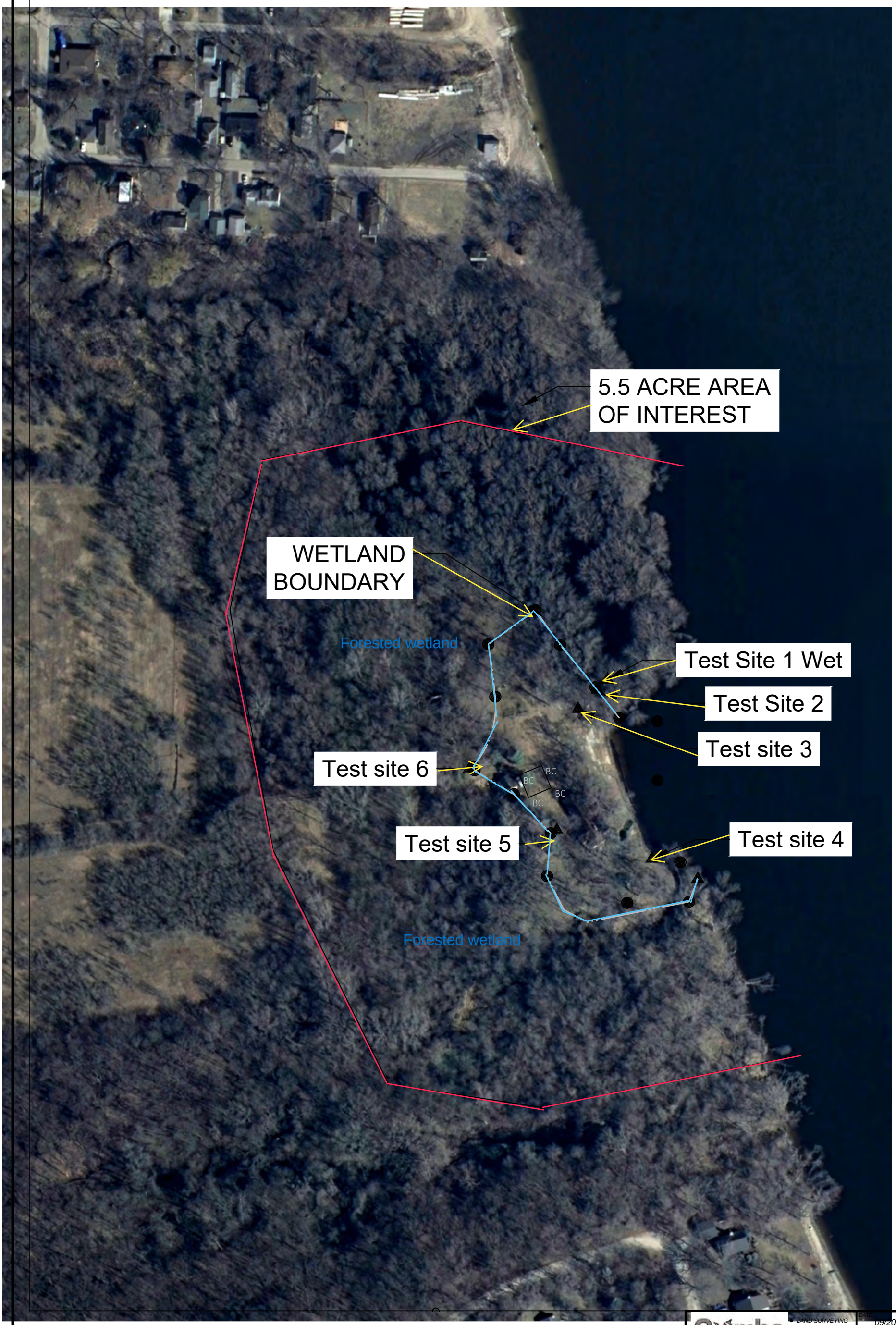
- Dane County Mask
- Parcels

0 125 250 500 Feet

N

Wetland Delineation Map

Holty Property, Albion Township, Dane County, Wisconsin



0 150 300 Feet

N

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fax: 608-752-0534

DATE	09/20/2021
BY	AJ
PROJECT NO.	121-522
CLIENT	HOLTY

Combs & Associates

Contours

September 16, 2021

0 125 250 500 Feet

Dane County Mask

Dane County Mask

5 foot Intervals

Index

Index Depression

1 foot Intervals

Intermediate

Intermediate Depression

Parcels

N


Holty SWDV
Legend
Wetland Indicators
Wetland Class Areas
Wetland Class Points
Dammed pond
Excavated pond
Filled/drained wetland
Wetland too small to delineate
Filled excavated pond
Filled Points
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Filled Areas
Wetland Class Areas
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Excavated pond
Filled/drained wetland
Wetland too small to delineate
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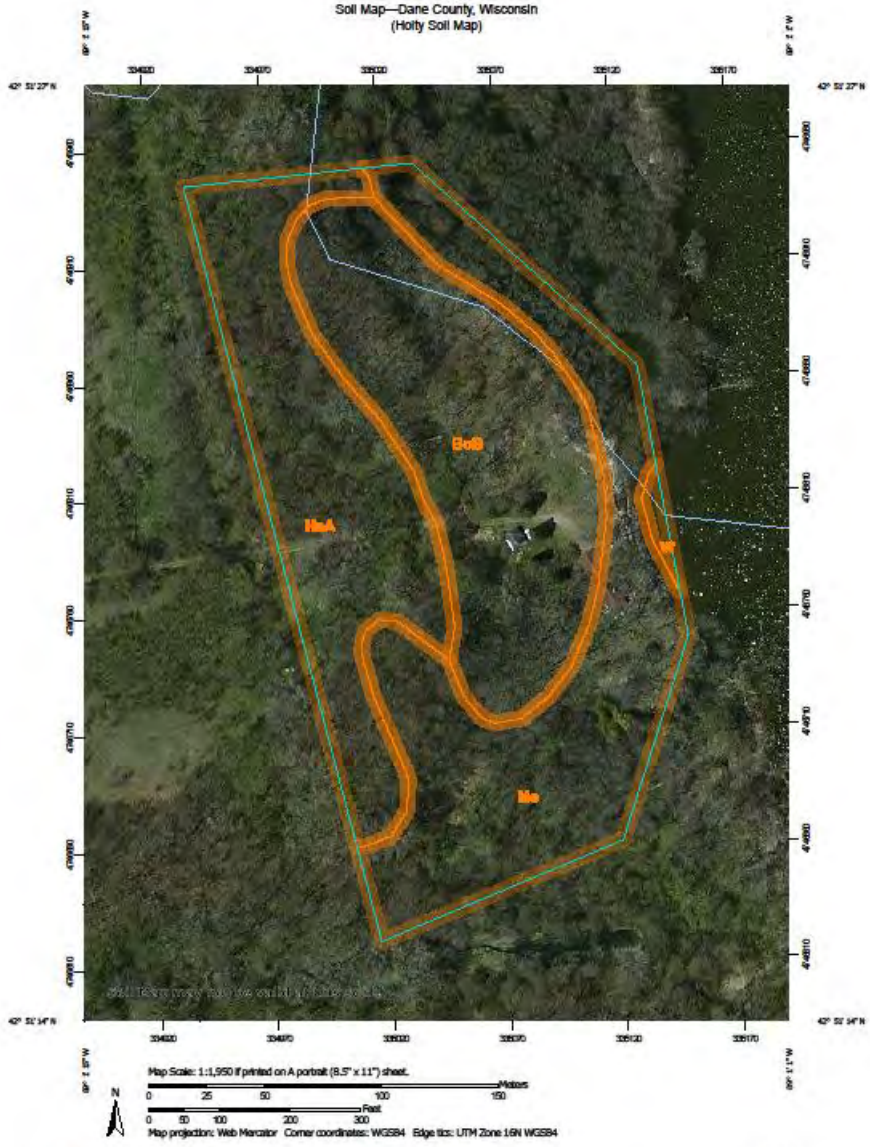
Major Roads
Interstate Highway
State Highway
US Highway
County and Local Roads
County HWY
Local Road
Railroads
Tribal Lands
Rivers and Streams
Intermittent Streams
0.1
0
0.05
0.1 Miles
1: 3,960
NAD_1983_HARN_Wisconsin_TM
DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/legal/
Notes

Soil Map—Dane County, Wisconsin
(Holty Soil Map)



Map Scale: 1:1,950 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

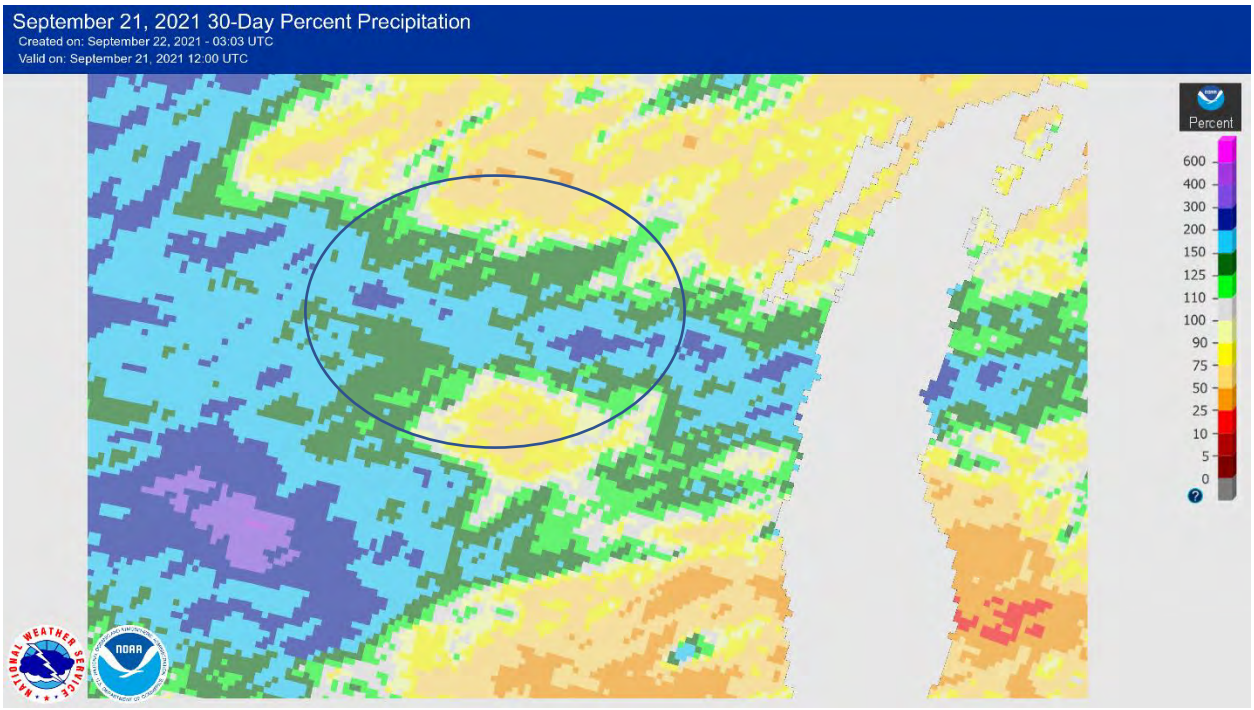
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Figure 1974 Aerial

Figure 2 1995 Aerial

Figure 3 2000 Aerial

Figure 4 2005 Aerial



MONTHLY PRECIPITATION DEPARTURE FROM NORMAL

Appendix 2: NRCS SOILS REPORT

Hydric Soil List - All Components

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

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

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

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

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

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

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

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

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

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

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Report—Hydric Soil List - All Components

Hydric Soil List - All Components–WI025-Dane County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
BoB: Boyer sandy loam, 2 to 6 percent slopes	Boyer	80-92	Outwash plains	No	—
	Fox	5-9	Outwash plains	No	—
	Casco	2-7	Outwash plains	No	—
	Dresden	1-4	Outwash plains	No	—
HaA: Hayfield silt loam, 0 to 3 percent slopes	Hayfield	90	Outwash plains	No	—
	Marshan	5	Depressions	Yes	2,3
	Dresden	3	Outwash plains	No	—
	Kegonsa	2	Outwash plains	No	—
Mc: Marshan silt loam	Marshan	100	Depressions on stream terraces	Yes	2,3
W: Water	Water greater than 40 acres	100	—	Unranked	—

Data Source Information

Soil Survey Area: Dane County, Wisconsin
Survey Area Data: Version 19, Jun 8, 2020

Appendix 3: NRCS WETS TABLE

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

Date	9/20/2021	**Landowner/Project**	Holty
Weather Station	Stoughton	**State**	WI
County	Dane	**Growing Season**	yes
Photo/obs Date	9/13/2021	**Soil Name**	Markham

shaded cells are locked or calculated

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

	Month	**30% chance <**	**30% chance >**	**Precip**	Condition **D**ry, **W**et, **N**ormal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	August	3.01	4.84	5.07	W	3	3	9
2nd Prior Month*	July	2.74	4.52	1.98	D	1	2	2
3rd Prior Month*	June	2.61	4.61	5.11	W	3	1	3
							Sum	**14**

*compared to photo/observation date

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

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

Conclusions: **prior period has been normal**

WETS Table

WETS Station: STOUGHTON WWTP, WI								
Requested years: 1971 - 2000								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	26.8	8.4	17.6	1.29	0.77	1.57	4	10.4
Feb	31.5	12.6	22.0	1.33	0.59	1.63	3	7.2
Mar	43.2	23.6	33.4	2.06	1.30	2.49	5	4.5
Apr	56.6	34.5	45.6	3.57	2.55	4.22	7	1.3
May	69.8	46.4	58.1	3.37	2.15	4.05	7	0.0
Jun	79.0	55.4	67.2	3.86	2.61	4.61	7	0.0
Jul	82.8	60.3	71.5	3.82	2.74	4.52	6	0.0
Aug	80.4	57.7	69.1	4.12	3.01	4.84	7	0.0
Sep	73.0	48.7	60.8	3.54	1.71	4.32	6	0.0
Oct	61.5	37.4	49.4	2.26	1.32	2.75	5	0.2
Nov	45.5	26.8	36.2	2.53	1.52	3.07	6	1.9
Dec	31.1	13.7	22.4	1.67	1.07	2.01	4	9.5
Annual:					-	-		
Average	56.8	35.5	46.1	-	-	-	-	-
Total	-	-	-	33.41			66	34.9

GROWING SEASON DATES			
Years with missing data:	24 deg = 10	28 deg = 8	32 deg = 8
Years with no occurrence:	24 deg = 0	28 deg = 0	32 deg = 0
Data years used:	24 deg = 20	28 deg = 22	32 deg = 22
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	4/8 to 10/28: 203 days	4/18 to 10/12: 177 days	4/30 to 10/3: 156 days
70 percent *	4/4 to 11/2: 212 days	4/13 to 10/17: 187 days	4/25 to 10/8: 166 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1931		0.39	2.02	1.15	2.62	M4.26	2.46	M2.67	6.07	M3.57	5.36	0.92	31.49
1932	1.04	0.81	1.73	0.95	2.04	2.90	3.41	M1.96	0.04	3.58	1.09	1.56	21.11
1933	0.47	0.86	3.25	M3.24	8.91	1.52	2.94	1.97	3.48	1.80	0.31	0.92	29.67
1934	0.68	0.13	0.78	1.41	0.55	2.65	3.95	1.69	5.15	1.93	7.26	1.05	27.23
1935	1.40	1.37	1.11	1.73	2.65	6.02	3.80	3.05	1.09	1.30	3.29	0.59	27.40
1936	1.60	1.77	0.49	1.10	0.78	2.41	1.50	9.11	4.30	3.14	0.38	2.57	29.15
1937	3.05	2.25	1.40	4.09	1.59	4.05	1.26	1.37	2.02	2.65	0.87	1.07	25.67
1938	2.22	M2.30	2.01	M1.85	3.65	5.62	3.90	4.96	10.35	0.97	2.37	0.88	41.08
1939	2.67	1.84	1.56	3.27	0.97	2.91	2.37	1.74	1.	2.	0.33	0.40	21.

									31	13			50
1940	1.39	1.21	0.89	2.38	2.92	4.35	3.78	M7.68	0.71	2.26	2.69	1.03	31.29
1941	1.87	0.72	1.61	2.10	6.05	3.48	3.74	0.91	6.34	3.67	0.74	1.60	32.83
1942	1.11	0.47	0.93	0.82	5.42	2.81	2.19	2.33	5.39	2.01	3.40	2.40	29.28
1943	1.93	0.57	3.44	2.58	2.50	2.59	2.29	3.15	1.98	1.52	1.37	0.73	24.65
1944	1.66	2.00	2.62	2.85	3.64	7.59	2.16	3.72	2.74	0.24	3.00	M1.45	33.67
1945	0.54	1.28	1.36	3.03	6.18	2.31	2.02	5.30	5.44	0.49	2.68	1.28	31.91
1946	2.59	0.86	2.98	0.83	1.85	3.95	0.38	3.48	3.40	1.29	2.35	2.13	26.09
1947	2.46	0.17	1.69	5.43	4.23	4.95	3.76	3.99	4.86	1.24	M2.49	1.67	36.94
1948	M0.58	2.30	3.77	3.02	4.73	3.67	1.25	2.34	2.57	1.30	2.99	2.07	30.59
1949	2.56	1.65	2.15	1.08	2.03	6.35	3.81	1.54	1.45	1.98	1.04	1.94	27.58
1950	2.73	1.31	1.96	3.71	3.82	4.36	7.58	1.36	2.78	0.81	1.00	1.98	33.40
1951	1.50	2.13	2.55	5.12	3.79	3.90	2.63	3.74	2.59	6.42	2.04	1.29	37.70
1952	2.12	0.54	2.96	1.42	2.49	3.64	5.47	5.64	0.56	0.08	3.79	2.05	30.76
1953	0.95	2.35	1.87	2.77	1.90	2.36	4.84	2.12	2.84	0.96	0.37	2.17	25.50
1954	0.62	0.48	1.18	4.99	2.39	7.66	3.81	3.15	3.27	5.17	0.83	1.33	34.88
1955	0.78	1.33	1.13	2.95	2.67	M4.33	5.75	3.45	1.37	3.09	0.49	0.82	28.16
1956	0.29	0.84	1.45	3.97	2.34	2.17	2.72	5.51	1.36	0.50	2.22	1.25	24.62
1957	0.43	0.41	1.14	2.89	5.38	4.07	2.38	3.81	0.80	1.29	3.44	2.06	28.10
1958	0.71	0.05	0.53	2.87	1.27	2.87	2.69	1.01	3.76	2.80	2.40	0.29	21.25
1959	1.23	1.42	2.81	3.88	1.77	2.85	6.05	5.06	4.75	6.08	2.00	2.56	40.46
1960	3.00	0.81	1.11	3.70	6.10	3.31	5.00	8.30	4.59	2.77	1.94	0.23	40.86
1961	0.15	0.93	4.14	2.32	1.64	2.28	6.25	0.67	10.67	4.69	2.81	1.14	37.69
1962	1.55	1.74	1.74	1.85	2.97	2.87	4.74	M0.77	1.49	1.89	0.43	0.80	22.84
1963	0.77	0.42	2.27	2.31	2.00	5.18	4.62	3.29	2.50	0.34	2.40	0.58	26.68
1964	1.05	0.22	3.46	3.61	3.59	3.97	3.86	3.27	1.31	0.24	1.83	0.41	26.82
1965	2.33	1.13	2.41	5.22	3.65	1.09	4.32	4.33	9.63	1.81	1.61	2.25	39.78
1966	1.12	1.33	2.57	2.18	4.89	3.73	3.65	4.79	1.53	2.74	1.45	2.16	32.14
1967	1.43	1.22	1.50	2.31	3.86	8.39	2.41	2.73	2.81	5.42	1.72	0.94	34.74
1968	0.63	0.67	0.48		2.51	8.66	2.88	2.12	5.73	0.80	1.63	3.17	29.28
1969	1.80	0.24	1.48	3.07	2.13	7.50	3.16	0.76	1.14	3.01	0.81	1.02	26.12
1970	0.44	0.27	0.79	2.52	6.26	3.37	3.82	1.34	7.82	3.28	1.16	0.84	31.91
1971	1.23	2.75	1.32	1.83	1.12	4.06	3.20	4.32	2.68	1.32	3.09	3.63	30.55
1972	0.57	0.51	1.73	2.84	3.97	1.59	6.80	4.99	4.75	3.09	0.85	2.04	33.73
1973	1.70	1.50	3.35	7.40	6.38	2.58	1.43	2.61	5.	2.	1.78	2.05	38.

									10	42			30
1974	2.60	1.57	3.70	4.31	4.90	4.68	3.75	3.56	0.54	1.81	1.59	1.67	34.68
1975	1.60	1.51	4.19	2.72	3.61	4.14	5.10	4.03	0.81	0.35	M1.45	M0.23	29.74
1976	0.79	2.09	M1.15	M3.04	M2.92	1.87	M0.99	3.85	0.71	1.65	0.17	0.44	19.67
1977	M0.34	1.06	3.40	2.85	M2.49	2.08	4.71	3.15	M1.00	M2.24	M1.81	1.60	26.73
1978	M0.52			3.34	3.79	6.19	6.35	1.23	5.65	1.36	M2.32	M1.60	32.35
1979	2.67	0.54	2.77		1.07	3.68	3.95	7.39	0.11	2.90	3.07	1.97	30.12
1980	1.36	0.37	0.38	2.57	1.68	5.94	3.35	6.37	7.09	1.10	0.90	1.38	32.49
1981	0.33	2.58	0.56	4.46	0.88	4.88	2.35	8.50	7.91	3.93	1.78	0.96	39.12
1982	M2.19	0.03	2.12	3.78	3.58	3.36	7.36	3.19	0.48	2.54	5.19	3.34	37.16
1983	0.34	1.67	1.48	1.83	3.52	2.02	1.72	3.69	2.57	1.61	2.20	2.16	24.81
1984	0.43	0.49	1.45	4.86	5.38	4.31	3.57	1.96	3.42	5.91	2.62	M2.55	36.95
1985	1.23	2.07	2.68	1.70	3.65	2.67	2.90	3.03	3.48	5.38	6.63	1.32	36.74
1986	M0.76	2.06	1.26	2.54	2.98	2.62	3.44	3.53	8.86				28.05
1987							5.27	7.81	4.56	1.17	3.38	M2.35	24.54
1988		M0.23	1.25	4.68	1.15	1.72	M1.72	3.82	2.74	1.95	3.97	2.55	25.78
1989	0.40	0.92	M1.43	M1.51	1.25	1.55	6.67		2.51	1.64		0.55	18.43
1990	1.55	M1.15	3.68	2.74	4.88	4.09	2.47	3.95	0.91	3.09	1.73	2.11	32.35
1991	M0.84	0.28	1.85	1.55	3.97	4.04	2.58	2.79	4.92	5.77	5.39	1.28	35.26
1992	0.70	1.53	2.13	2.80	0.87	0.62	5.57	M2.05	5.89	1.12	4.88	M2.63	30.79
1993	2.03	1.51	2.69	6.88	3.99	7.56	4.02	2.56	5.08	0.78	1.73	0.67	39.50
1994	M1.44	2.64	0.61	1.69	1.75	5.26	2.47	7.42	4.42	0.70	2.72	0.73	31.85
1995	1.86	0.03	2.18	4.55	M4.45								13.07
1996													
1997									0.90	1.36	1.44	1.11	4.81
1998	M1.95	1.68	3.72	5.39	M4.88	6.85	2.04	5.19	2.47	4.23	1.50	M0.59	40.49
1999	M3.15	1.11	M0.55	7.85	6.84	5.07	4.69	2.51	2.38	0.90	1.65	1.39	38.09
2000	M0.98	2.79	1.01	3.03	6.01	6.92	2.63	3.58	4.61	0.69	1.79	2.11	36.15
2001	2.34	M3.23	0.44	4.51	5.61	3.74	1.86	7.46	7.26	3.07	2.13	1.68	43.33
2002	M0.41	M1.90	4.01	4.08	3.71	3.91	2.39	3.82	4.47	3.46	0.62	M0.88	33.66
2003	0.22	0.27	1.66	1.72	5.23	3.59	6.26	1.17	3.67	1.72	6.06	2.12	33.69
2004	0.58	1.02	4.37	2.15	11.19	4.19	4.65	3.80	1.28	2.72	2.24	1.56	39.75
2005	3.14	1.53	1.31	2.06	3.26	4.06	4.85	2.43	1.59	0.51	3.77	0.93	29.44
2006	2.27	1.02	3.11	5.20	M4.34	4.99	5.29	6.29	3.10	3.66	3.46	1.24	43.97
2007	1.24	2.45	2.81	4.98	M1.37	4.12	2.03	16.40	2.05	2.93	0.44	4.75	45.57

2008	1.79	3.34	1.90	7.00	2.81	9.57	4.42	1.86	3.89	2.19	1.58	3.16	43.51
2009	M0.87	1.77	6.91	5.05	2.61	4.30	2.06	3.64	2.84	4.36	1.73	3.89	40.03
2010	0.84	M0.56	1.39	M3.34	3.84	6.73	8.91	2.55	2.62	3.23	1.91	1.35	37.27
2011	0.90	M0.87	3.05	M3.06	2.26	M2.92	M2.34	2.05	M2.33	1.38	M1.63	M2.01	24.80
2012	M0.41	1.10	M2.20	M0.72	M2.44	M0.17	M3.84	M2.12	M1.81	4.49	1.04	M2.71	23.05
2013	2.80	M3.00	2.11	7.07	5.27	M11.90	3.88	1.74	2.75	2.50	3.42	1.38	47.82
2014	1.12	1.36	1.17	4.89	3.39	6.47	4.04	4.21	3.16	3.80	M1.66	1.04	36.31
2015	0.72	0.70	0.47	3.00	4.61	4.09	3.61	3.04	5.39	1.74	5.64	3.51	36.52
2016	0.55	0.64	4.07	2.08	3.04	5.64	4.77	5.80	4.34	3.72	2.80	1.97	39.42
2017	2.43	1.34	2.69	6.80	3.62	7.55	6.60	3.99	0.70	4.82	1.16	0.67	42.37
2018	2.17	3.54	0.75	1.87	8.12	10.50	2.68	9.45	7.00	7.09	M1.55	1.86	56.58
2019	3.10	3.19	M0.96	3.24	6.33	3.19	4.35	5.72	5.19	5.98	3.16	1.75	46.16
2020	1.92	1.18	3.00	M2.81	4.60	4.34	3.23	0.85	4.72	2.67	1.87	1.63	32.82
2021	1.69	M0.90	1.00	1.67	2.97	5.11	1.98	5.07	M0.78				21.17

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2021-09-20

Appendix 4: SITE PHOTOS

Dan Holty Wetland Delineation

September 14th 2021 By Andy Jegerlehner

Sample points 1 and 2

Looking North at Site and SP 1

Looking North at Site and SP 2. Sand on surface

North end

Looking east into wetland
Towards Lake

Looking South at site 3

South End

Looking South at Wetland Boundary

Western Wetland edge looking North
At sample site 5

West End

Looking West at wetland area from point 6

Looking South at wetland area from point 6

Appendix 5: WETLAND DETERMININATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Holty City/County: Dane Sampling Date: 9/14/2021

Applicant/Owner: Holty State: WI Sampling Point: 1

Investigator(s): AJ Section, Township, Range: 36 T5N R12E

Landform (hillside, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum:

Soil Map Unit Name: Marshan NWI classification: Yes

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes x	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes	No x	Depth (inches):
Water Table Present?	Yes x	No	Depth (inches): 18
Saturation Present? (includes capillary fringe)	Yes x	No	Depth (inches): 6

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

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

Remarks:
Open water 30' to the North

VEGETATION – Use scientific names of plants.

Sampling Point: 1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus macrocarpa*	30	Yes	FACU
2. *Catalpa speciosa*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Polygynum pensylvanica*	50	Yes	FACW
2. *Phalaris arundinacea*	20	Yes	FACW
3. *Setaria faberi*	5	No	FACU
4. *Chamaenerion angustifolium*	5	No	FAC
5. *Acalypha rhomboidea*	5	No	FACU
6. *Eupatorium perfoliatum*	10	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size:)			
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	5	x 3 =	15
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	145 (A)		415 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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** X **No** ___

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

SOIL

Sampling Point: 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/1	100					Sandy	
6-18	10yr 2/1	100	10yr 4/6	5	C		Loamy/Clayey	Prominent redox concentrations

[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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

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**)
- ___ 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 (F22)
- ___ 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** X **No** ___

Remarks:

This is a Sandy Loam with a layer of sand on the surface due to fluctuating lake water levels

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Holty City/County: Dane Sampling Date: 9/14/2021

Applicant/Owner: Holty State: WI Sampling Point: 2

Investigator(s): AJ Section, Township, Range: 36, T5N R13E

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

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum:

Soil Map Unit Name: Marshan NWI classification: On the Edge

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	**Is the Sampled Area**
Hydric Soil Present?	Yes	No x	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Normal precipitation however lake level is low.

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 Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- x Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No x	Depth (inches):
Water Table Present?	Yes	No x	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No x	Depth (inches):

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus macrocarpa*	50	Yes	FACU
2. *Catalpa speciosa*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia artemisiifolia*	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Vitis riparia*	10	Yes	FAC
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	100 (A)		390 (B)

Prevalence Index = B/A = 3.90

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** x

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

SOIL

Sampling Point 2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 5/2	100					Loamy/Clayey	Sandy Loam
6-18	10yr 2/1	100					Loamy/Clayey	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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ 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)
- ___ Marl (F10) (**LRR K, L**)

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**)
- ___ 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 (F22)
- ___ 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** x

Remarks:

Transition area from wetland to upland

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Holty City/County: Dane Sampling Date: 9/14/2021

Applicant/Owner: Holty State: WI Sampling Point: 3

Investigator(s): AJ Section, Township, Range: 36 T5N, R12E

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope %: 0-0.5

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum:

Soil Map Unit Name: Boyer NWI classification: Not Wetland

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	**Is the Sampled Area**
Hydric Soil Present?	Yes	No x	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This is on the higher ground.

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 Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No x	Depth (inches):
Water Table Present?	Yes	No x	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No x	Depth (inches):

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

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

Remarks:
Normal conditions are present however lake level is low.

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus macrocarpa*	30	Yes	FACU
2. *Catalpa speciosa*	20	Yes	FACU
3. *Morus rubra*	10	No	FACU
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Rhamnus cathartica*	10	Yes	FAC
2. *Rubus occidentalis*	20	Yes	UPL
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia artemisiifolia*	20	Yes	FACU
2. *Elymus repens*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size:)			
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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	110	x 4 =	440
UPL species	20	x 5 =	100
Column Totals:	140 (A)		570 (B)

Prevalence Index = B/A = 4.07

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.)

SOIL

Sampling Point: 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 5/2	100					Loamy/Clayey	Dirty Sandy Loam
8-18	10yr 3/1	100					Loamy/Clayey	Dirty 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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ 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)
- ___ Marl (F10) (**LRR K, L**)

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**)
- ___ 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 (F22)
- ___ 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** x

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Holty City/County: Dane Sampling Date: 9/14/2021

Applicant/Owner: Holty State: WI Sampling Point: 4

Investigator(s): AJ Section, Township, Range: 36, T5N, R12E

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): flat Slope %: 0

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum:

Soil Map Unit Name: Boyer NWI classification: Non

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

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

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 Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No x	Depth (inches):
Water Table Present?	Yes	No x	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No x	Depth (inches):

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus macrocarpa*	30	Yes	FACU
2. *Acer negundo*	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Acer negundo*	5	No	FAC
2.			
3. *Rhamnus cathartica*	20	Yes	FAC
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ambrosia artemisiifolia*	30	Yes	FACU
2. *Elymus repens*	10	Yes	FACU
3. *Silene latifolia*	10	Yes	UPL
4. *Verbascum speciosum*	10	Yes	UPL
5. *Rubus occidentalis*	5	No	UPL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	=Total Cover	
Woody Vine Stratum (Plot size:)			
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: 28.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	70	x 4 =	280
UPL species	25	x 5 =	125
Column Totals:	150 (A)		570 (B)

Prevalence Index = B/A = 3.80

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** x

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

SOIL

Sampling Point: 4

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
0-18	10yr 3/1	100					Loamy/Clayey	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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ 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)
- ___ Marl (F10) (**LRR K, L**)

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**)
- ___ 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 (F22)
- ___ 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** x

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Holty City/County: Dane Sampling Date: 9/14/2021

Applicant/Owner: Holty State: WI Sampling Point: 5

Investigator(s): AJ Section, Township, Range: 36, T5N, R12 E

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope %: 0-0.5

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum:

Soil Map Unit Name: Boyer NWI classification: No

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

Are Vegetation , x Soil x , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No ___	**Is the Sampled Area**
Hydric Soil Present?	Yes x	No ___	**within a Wetland?** **Yes** ___ **No** X
Wetland Hydrology Present?	Yes ___	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Normal circumstances present. Area was disturbed during excavation to find existing water and septic line

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 Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 15

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: _____

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Rhamnus cathartica*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	50 =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	10	No	FACW
2. *Oxalis corniculata*	40	Yes	FACU
3. *Solanum dulcamara*	20	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70 =Total Cover		
Woody Vine Stratum (Plot size:)			
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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	70	x 3 =	210
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	120 (A)		390 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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** X **No** ___

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

SOIL

Sampling Point: 5

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
0-8	10yr 2/1	100					Loamy/Clayey	
8-18	10yr 3/1	100	10yr 4/6	5	C	PL	Loamy/Clayey	Prominent redox concentrations
18-24	10yr 8/2	100					Sandy	

[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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

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**)
- ___ 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 (F22)
- ___ 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** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Holty City/County: Dane Sampling Date: 9/14/2021

Applicant/Owner: Holty State: WI Sampling Point: 6

Investigator(s): AJ Section, Township, Range: 36, T5N R12E

Landform (hillside, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR K, MLRA 95B Lat: Long: Datum:

Soil Map Unit Name: Hayfield NWI classification: Yes

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes x	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Normal Circumstances but Lake level is low

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 6

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 6

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Rhamnus cathartica*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	10	Yes	FACW
2. *Boehmeria cylindrica*	40	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size:)			
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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	150 (A)		400 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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** X **No** ___

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

SOIL

Sampling Point 6

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 2/1	100					Loamy/Clayey	
6-18	10yr 3/1	100					Mucky Sand	
18-24	10yr 2/1	100					Muck	

[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)
- X Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- x Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ 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)
- ___ Marl (F10) (**LRR K, L**)

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**)
- ___ 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 (F22)
- ___ 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** X **No** ___

Remarks: