



Wetland Delineation Report

MH680

Township of Nunda

McHenry County, Illinois

Prepared for:

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Table of Contents

1	Introduction	1
2	Project Description	1
3	Statement of Qualifications.....	1
4	Regulatory Requirements.....	2
4.1	State and Federal Regulations	2
4.2	Local Regulations	3
5	Mapping and Background Information	3
5.1	Topography	3
5.2	National Wetlands Inventory	3
5.3	Natural Resources Conservation Service	3
5.4	National Hydrography Dataset	4
5.5	IDNR Public Waters.....	4
5.6	Soil Survey	4
5.7	Federal Emergency Management Agency Floodplain.....	4
5.8	Aerial Photography Review	4
5.9	Precipitation.....	4
6	Field Investigation	5
7	Summary of Results.....	6
8	Report Preparation.....	8
9	Conclusion	8
10	Disclaimer	8
	References.....	9

List of Tables

Table 1: Wetland Delineation Summary	6
Table 2: Linear Feature Delineation Summary	7

List of Figures

- Figure 1: Project Location
- Figure 2: USGS Topographic Map
- Figure 3: NWI, NHD, NRCS, and 2-ft Contours Map
- Figure 4. Hydric Soils Map

Figure 5. FEMA Floodplain Map

Figure 6. Delineation Summary Map

Appendices

Appendix A: Hydric Soils Information

Appendix B: Historic Aerial Review

Appendix C: Precipitation Data

Appendix D: Field Data Sheets

Appendix E: Photos

Appendix F: Floristic Quality Assessment

1 Introduction

Wetland scientists Keegan Sansone and Cameo Neumann, and Mason Kunkel and Jake Ackerman with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for TPE IL MH680, LLC and the MH680 Project in the township of Nunda, McHenry County, Illinois. The wetland investigation and delineation included the parcel ID #1409300006 and parcel ID #1409400002 encompassing 94 acres of Section 9, Township 44N, Range 8E (the “study area”). The study area is shown on **Figure 1**. The study area consists of agricultural land for the cultivation of row crops, forested corridors, steams, prairies, and hay fields.

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (August 2010) occurred on August 21, 2024, and September 24, 2024. The purpose of this delineation was to identify the extent of wetlands within the study area. The information will be used to facilitate project design and determine if aquatic resource impacts are avoidable and/or if minimization of impacts can result from design modifications.

2 Project Description

TPE IL MH680, LLC is proposing a community scale solar development. The project will primarily consist of ground mounted solar panels, racking, associated electrical components, with security fencing and interior access roads.

3 Statement of Qualifications

Kimley-Horn has extensive experience completing wetland investigations and delineations across the United States. Kimley-Horn’s personnel has been trained to use the *1987 Corps of Engineers Wetlands Delineation Manual (USACE, 1987)* along with the applicable regional supplements. Kimley-Horn has experience completing off-site hydrology analysis, historic aerial reviews, and difficult or atypical situation delineations.

Ashley Payne earned a Bachelor of Arts Degree in Environmental Biology from Saint Mary’s University of Minnesota. She is an environmental scientist with over 14 years of experience specializing in wetland services environmental documentation and assessments, and geographic information systems mapping and data collection. During the last 14 years, she has successfully completed hundreds of delineations for various types of projects. In the last seven years, Ashley’s primary focus has been the delineation of agricultural fields for future development. She is familiar with completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. Ashley has also obtained environmental permits for clients through efficient and thorough preparation of permit applications, and by coordinating with agency personnel. Ashley is a certified delineator in the state of Minnesota and her primary focus is environmental work in the Midwest. She has extensive experience working in Minnesota, Illinois, Wisconsin, Michigan, Iowa, and South Dakota.

Keller Leet-Otley earned a Bachelor of Arts Degree in Environmental Science from Colby College. He is an environmental scientist who specializes in wetland delineation and permitting, geographic information systems mapping, and threatened and endangered species due diligence. He has led the delineation of agricultural fields, roadway corridors, and undeveloped areas for future development and transit projects. He is proficient using ArcGIS to produce client specific exhibits for various project types. Keller has prepared environmental permit applications and documentation for public and private sector clients. He is a certified delineator in the state of Minnesota and his focus is environmental work in the upper Midwest.

Keegan Sansone holds a Bachelor of Science Degree in Environmental Science from the University of St. Thomas. He brings over 2 years of professional experience in environmental consulting. He specializes in wetland delineation, environmental due diligence, and geographic information systems. He has lead field teams in the delineation of hundreds of aquatic resources in agricultural fields, herbaceous land, and unmanaged forested areas for private sector clients throughout the Midwest. Keegan has completed Phase I Environmental Site Assessments for over 40 projects including cellular tower projects, community and utility scale solar projects, and private land developments in Minnesota, Illinois, Indiana, Michigan, Colorado, South Dakota, Missouri, and Alaska. He has experience in GIS data management, research, development, and optimization for client deliverables and visualization.

Cameo Neumann earned a Bachelor of Science Degree in Biology with an emphasis in Ecology and Environmental Biology from the University of Wisconsin-Eau Claire. She is an environmental biologist who specializes in wetland delineation and crediting, geographic information systems mapping, and species surveys. She has led the delineation of roadway corridors for future transit projects and assisted with the delineation of agricultural fields, and undeveloped areas for future development and transit projects.

Mason Kunkel earned a Bachelor of Science Degree in Biology with an emphasis in Wildlife Conservation from Western Colorado University. He is a biologist who specializes in wetland delineation and geographic information systems mapping. He has assisted with the delineation of agricultural fields, roadway corridors, and undeveloped areas for future development and transit projects. He is proficient using ArcGIS to produce client specific exhibits for various project types. He is familiar with completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. He has extensive experience working in Minnesota, Iowa, Illinois, and Michigan.

Jake Ackerman holds a Bachelor of Science in Environmental Science from Rhodes College. Jake is proficient in geographic information systems, delineating aquatic resources, as well as mapping environmental and cultural resources. He has experience with delineations in Minnesota and Illinois for solar, roadway, and land development projects. Jake has conducted this work in both developed and undeveloped land as well as agricultural fields for private and public sector clients.

4 Regulatory Requirements

A summary of the permit requirements that may pertain to the project is provided below. Any activity planned within areas identified as wetland must be coordinated with and approved by the appropriate agencies prior to commencement of such activities.

4.1 State and Federal Regulations

The regulatory authority of the U.S. Army Corps of Engineers (USACE) covers Waters of the United States (WOTUS) in accordance with Section 404 of the Clean Water Act. Generally, the USACE reviews delineations to determine whether wetlands are jurisdictional (i.e., WOTUS). On December 30, 2022, the U.S. Environmental Protection Agency (EPA) and Department of the Army (“the agencies”) announced the final “Revised Definition of ‘Waters of the United States’” rule. The rule took effect on March 20, 2023. Based on a preliminary federal injunction on April 12, 2023, the Revised Definition was revoked and the pre-2015 regulatory regime is in effect for 27 states. In Illinois, the 2023 Revised Definition of the Waters of the United States is in effect as of the date of this report.

Based on the May 25, 2023 ruling of *Sackett v. EPA* (2023), the Clean Waters Act’s use of “waters” encompasses only relatively permanent, standing, or continuously flowing bodies, ordinarily called streams, oceans, rivers, and lakes. Wetlands qualify as WOTUS only if “indistinguishable from waters of the United States,” having a continuous surface connection to bodies that are waters of the United States in their own right, with no clear division between waters and wetlands. As of September 8, 2023, the EPA and the

Department of the Army amended the WOTUS rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*.

Section 10 of the Rivers and Harbors Act requires that regulated activities conducted below the ordinary high-water mark elevation of navigable Waters of the U.S. or mean high water mark for tidal waters be approved/permitted by the USACE. Regulated activities include the placement/removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway. Navigable Waters of the U.S. are those waters that are subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used or have been used in the past or may be susceptible to use to transport interstate or foreign commerce.

At this time, Illinois does not regulate wetlands under Section 404, or require setback buffers for wetlands on private land.

4.2 Local Regulations

At this time, based on publicly available information, McHenry County requires all development activities impacting wetlands to comply with Chapter 17.60.060 in the County Code of Ordinances. According to the McHenry County Code of Ordinances, development activities that create an impact within a wetland, WOTUS, isolated waters of the county, or their associated buffers, regardless of the Corps of Engineers jurisdiction, must submit a stormwater management permit application. Additionally, McHenry County Code of Ordinances states that a minimum 30-foot buffer is required for any wetland between 0.25 and 0.5 acre and a 50-foot buffer for any wetland over 0.5 acre. Linear features with a tributary area over 20 acres require a 50-foot buffer, and a 100-foot buffer may be required for higher classifications of linear features.

5 Mapping and Background Information

Prior to field reconnaissance, potential wetland areas within the project study areas were identified through a desktop review of United States Geological Survey (USGS) topographic maps, National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), Illinois Department of Natural Resources (IDNR) Public Waters, LiDAR, the soil survey for McHenry County, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), aerial photography, and antecedent precipitation for a location near the study area. The selected resources are described below:

5.1 Topography

The McHenry 7.5-minute USGS topographic map and 2-foot contours derived from a digital elevation model (DEM) from USGS were reviewed for the study area. According to the USGS topographic map (see **Figure 2**), the study area is primarily undeveloped land. There is one wetland and one stream depicted in the eastern portion of the study area. The 2-foot contour data depicts the study area sloping gradually east offsite. The study area ranges from 850 feet (above mean sea level) to 788 feet, see **Figure 3**.

5.2 National Wetlands Inventory

NWI mapping, available from the U.S. Fish and Wildlife Service (USFWS) Wetland Mapper (updated in 2024), depicts potential wetland areas and waterbodies based on stereoscopic analysis of high altitude and aerial photographs and was reviewed for the study area. According to the NWI map, there is one freshwater emergent wetland (PEM1C) in the western portion of the study area and two riverine wetlands (R4SBC,R5UBG) along the eastern and southeastern border of the study area, see **Figure 3**.

5.3 Natural Resources Conservation Service

The NRCS Wetlands, available from the McHenry County IL data portal depicts potential wetland areas and waterbodies. According to the NRCS map there are two NRCS wetlands present within the study

area. A large NRCS wetlands overlaps the northeastern portion of the study area and the other NRCS wetland is present in the western portion of the study area, **see Figure 3**.

5.4 National Hydrography Dataset

The NHD, available from USGS, depicts drainage networks and related features, including rivers, streams, canals, lakes, and ponds. The NHD dataset is not field verified. According to NHD mapping, there is one NHD waterbody along the eastern border of the study area and two NHD flowlines along the eastern and southeastern border of the study area, **see Figure 3**.

5.5 IDNR Public Waters

The IDNR Public Waters viewer depicts IDNR Public Waters. According to the Public Waters viewer, there are no Public Waters within the study area or the vicinity of the study area.

5.6 Soil Survey

The Natural Resources Conservation Service's (NRCS) *Web Soil Survey* for McHenry County was reviewed for the study area. According to the survey, there are seven soil mapping units within the study area which are generally silty loams with some muck, loam, and silty clay loam soils. Approximately 72% of the study area was mapped with soils with a non-hydric soil rating below 5%, approximately 19% of the soils were mapped with a predominantly hydric soil rating of 85%. The remaining 9% of mapped soils had a hydric rating of 100%. Maps and information obtained from the NRCS online web soil survey are included in **Figure 4** and **Appendix A**.

5.7 Federal Emergency Management Agency Floodplain

The FEMA FIRM was reviewed for the study area. According to FEMA, the study area is located in Zone X of panel 17111C0215J (effective November 16, 2006) and in Zone X and A of panel 17111C0220J (effective November 16, 2006) the southeastern corner of the study area overlaps Zone A of the FEMA floodplain, **see Figure 5**.

5.8 Aerial Photography Review

Aerial photography, acquired from Google Earth, was reviewed to identify the potential for wetlands across the study area. Ten photos were reviewed between 1988 and 2023, available in **Appendix B**. These photos were used to determine the presence of wetland hydrology using industry accepted offsite hydrology analysis for areas showing crop stress or other potential wetland signatures. Each image was interpreted for the presence or lack of hydrologic indicators.

Six Areas of Investigation (AOIs) were identified in the study area. AOI 1 had wetland signatures in at least 30% of the historic aerials with normal precipitation conditions, met secondary hydrology indicators and hydric soils during the field delineation and was delineated as Wetland 1. AOIs 2 and 7 had wetland signatures in at least 30% of the historic aerials with normal precipitation conditions but lacked secondary hydrology indicators during the field delineation and was not delineated as a wetland. AOIs 3-6 did not have wetland signatures in at least 30% of the historic aerials with normal precipitation conditions and lacked hydrology indicators or hydric soils in the field; thus, these areas were not delineated as wetland. The AOIs are shown in **Appendix B**.

5.9 Precipitation

Precipitation data for the study area were obtained from the U.S. Army Corps of Engineers Antecedent Precipitation Tool. WETS (Wetlands) tables were reviewed for climate stations within the vicinity of the study area to determine the current hydrologic conditions for the study area and if those conditions are typical for this time of year. Ninety-day rolling precipitation levels leading up to the field review were

compared to historical data. The data show that August and June months had normal precipitation levels and July had wetter than normal precipitation levels. In summary, the field visit constituted normal precipitation conditions. This information is included in **Appendix C**.

6 Field Investigation

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) along with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on August 21, 2024, and September 24, 2024.

During the onsite delineation, vegetation, soils, and current hydrologic characteristics were evaluated at each wetland area and area of investigation identified within the study area. Wetland boundaries were digitally recorded with a Arrow GPS with sub-meter accuracy until one or more of the three criteria were no longer present. The sample point locations, wetland boundaries, and aquatic resources are shown in **Figure 6**.

In addition to wetlands that were investigated and delineated, non-wetland aquatic features were delineated. Non-wetland aquatic features are defined based on the observation of the following characteristics:

- Flow
 - Perennial: contains water at all times of the year except during extreme drought
 - Intermittent: contains water occasionally or seasonally
 - Ephemeral: contains water only during and immediately after periods of rainfall or snowmelt
- Ordinary High Water Mark (OHWM): The limit line on the shore established by the fluctuation of the water surface. It is shown by such things as a clear line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, the presence of litter and debris, or other features influenced by the surrounding area
- Bank Shape
 - Undercut: banks that overhang the stream channel
 - Steep: bank slope of approximately greater than 30 degrees
 - Gradual: bank slope of approximately 30 degrees or less

Sample points were completed for all observed wetlands. Historic aerials were reviewed for sample points taken in agricultural fields (See **Appendix B**). The field data sheets are included in **Appendix D**. Study area photos and a photo locations map can be found in **Appendix E**.

7 Summary of Results

Table 1: Wetland Delineation Summary

Resource ID	Wetland Plant Community	Cowardin Classification ¹	Size (acres) ²	NWI?	Hydric Soils? ³	Photo ID	Associated Sample Points	NOTES	Regulatory Status ⁴
Wetlands									
Wetland 1	Seasonally Flooded Basin, Shallow Marsh	PEM1A, PEM1D	0.11	N/A	No	1-2	SP-1 (Wet) SP-2 (Up)	Wetland complex located in ditch in the western central portion of the study area. The wetland complex was comprised with cattails in the center of the ditch with RCG and vervain fringe. The wetland collects runoff from the surrounding landscape and Ephemeral Stream 1 then drains east to a drain tile. The wetland boundary was based on the presence of hydric soil, topography, and the presence of hydrophytic vegetation dominance.	USACE Non-Jurisdictional: does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). County Regulated
Wetland 2	Seasonally Flooded Basin	PEMAF	0.04	N/A	Yes	4-6	SP-3 (Wet) SP-4 (Up)	Wetland located in a depression in central portion of study area within agricultural field. The wetland collects runoff from the surrounding landscape and drains offsite via a drain tile. This aquatic resource is surficially isolated. The wetland boundary was based on change in topography and a historic aerial review.	USACE Non-Jurisdictional: does not have a continuous surficial connection to a TNW or RPW. County Regulated
Wetland 3	Shallow Marsh, Seasonally Flooded Basin, Scrub Shrub	PEM1B, PSS1C, PEM1D	0.83	PEM1C	Yes	14-15	SP-7 (Wet) SP-8 (Up)	Wetland complex located in the western portion of the study area. The wetland complex consisted of a cattail marsh, willow thicket, and RCG/phragmites fringe. The wetland collects water from Ephemeral Stream 1, the surrounding landscape and drains east via Ephemeral Stream 1. The wetland boundary was based on the presence of hydric soil, change in	USACE Non-Jurisdictional: does not have a continuous surficial connection to a TNW or RPW. County Regulated

¹ The Cowardin Classification System codes are found here:

https://doee.dc.gov/sites/default/files/dc/sites/ddoe/release_content/attachments/Appendix%20H_Cowardin%20Classification%20Diagram.pdf

² Size of wetland features and additional areas investigated provided in acres within the study area.

³ Areas identified as hydric contain partially hydric soils (equal to or greater than 33% of soil component) mapped within the resource area.

⁴ Regulatory Status is based on best professional judgment and has not been verified with agency staff.

Resource ID	Wetland Plant Community	Cowardin Classification ¹	Size (acres) ²	NWI?	Hydric Soils? ³	Photo ID	Associated Sample Points	NOTES	Regulatory Status ⁴
								topography, and the presence of hydrophytic vegetation dominance.	

Table 2: Linear Feature Delineation Summary

Resource ID	Cowardin Classification	Size (linear feet) ⁵	NWI?	Photo ID	NOTES	Regulatory Status ⁶
Streams						
Perennial Stream 1	R4SBC	1319	R4SBC	10	Perennial Stream 1 was located in the eastern portion of the study area and collected drainage from the surrounding landscape and an offsite NWI. The stream drained offsite to the south. The stream had 10 feet steep banks and was 20 feet wide with 2 feet of flowing water. The stream bed was comprised of mud, rocks, and sand.	USACE-Jurisdictional: tributary contributes surface water flow to an offsite Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW); County Regulated
Ephemeral Stream 1	N/A	275	N/A	16	Ephemeral Stream 1 was located in the central western portion of the study area and collected drainage from the surrounding landscape and Wetland 3. The stream drained to the east to Wetland 1. The stream had 3 feet high and 4 feet wide banks with low flowing water of 2 inches deep. The stream bed was comprised of mud, rocks, and sand.	Non-Jurisdictional (USACE): tributary does not classify as a RPW or TNW. County Regulated

⁵ Size of non-wetland, linear features provided in linear feet within the study area.

⁶ Regulatory Status is based on best professional judgment and has not been verified with agency staff.

8 Report Preparation

The procedures followed for this wetland delineation are in accordance with the *Corps of Engineers Wetlands Delineation Manual* and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010).

This report describes study area conditions for a specific date in time and is generally valid for a period of five years from the date of the final field investigation and delineation, which was September 24, 2024.

9 Conclusion

The field delineation identified three wetlands, one ephemeral stream, and one perennial stream within the study area. Each of the delineated resources is described in Table 1 and Table 2. Only the perennial stream is anticipated to be USACE-jurisdictional, all of the wetlands are anticipated to be regulated by the county.

10 Disclaimer

Kimley-Horn has prepared this document based on limited field observations and our interpretation, as scientists, of applicable regulations and agency guidance. While Kimley-Horn believes our interpretation to be accurate, final authority to interpret the regulations lies with the appropriate regulatory agencies. Regulatory agencies occasionally issue guidance that changes the interpretation of published regulations. Guidance issued after the date of this report has the potential to invalidate our conclusions and/or recommendations and may cause a need to reevaluate our conclusions and/or recommendations.

Because Kimley-Horn has no regulatory authority, the Client understands that proceeding based solely upon this document does not protect the Client from potential sanction or fines from the applicable regulatory agencies. The Client acknowledges that they have the opportunity to submit documentation to the regulatory agencies for concurrence prior to proceeding with any work. If the Client elects not to do so, then the Client proceeds at their sole risk.

References

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Figures

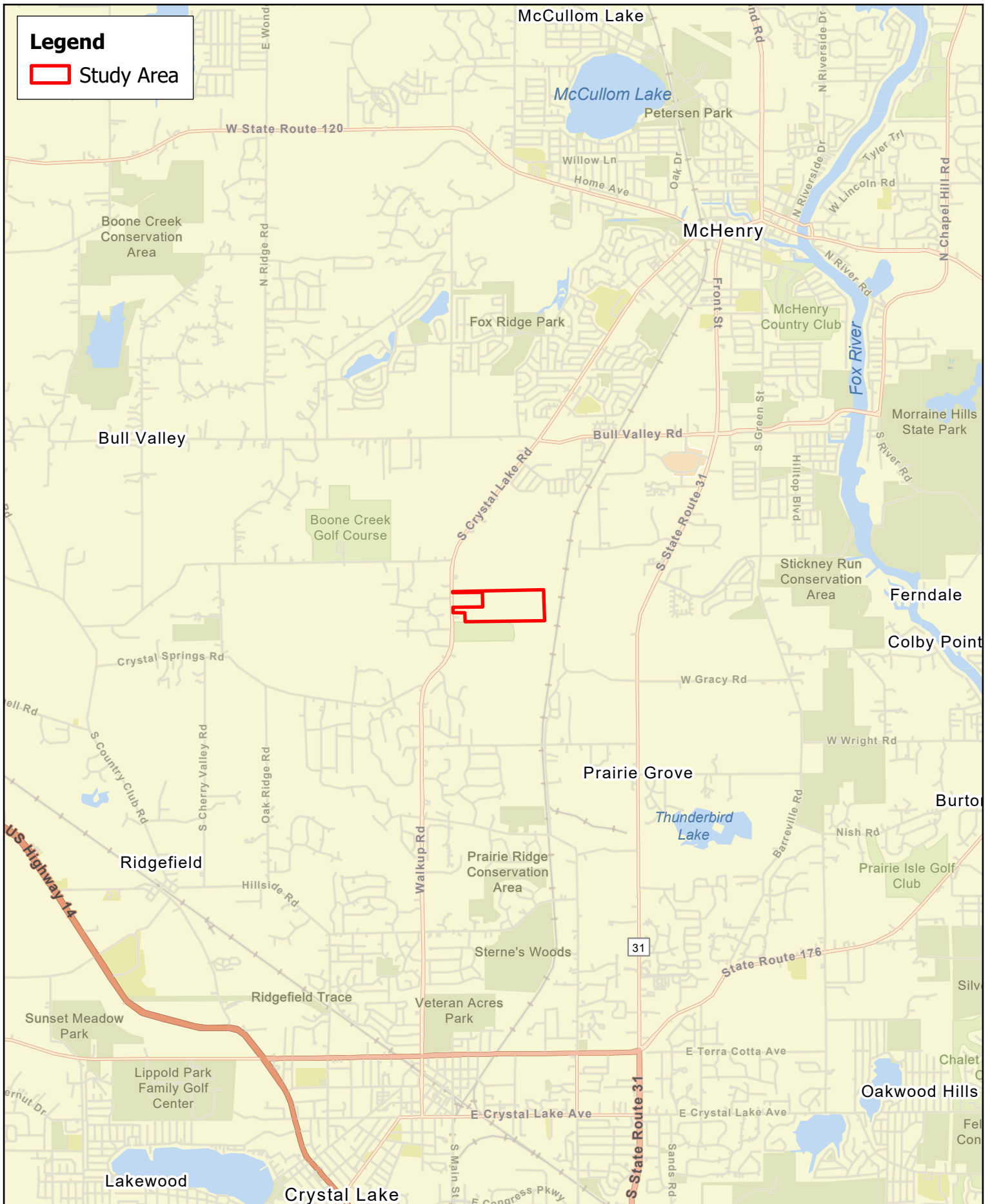
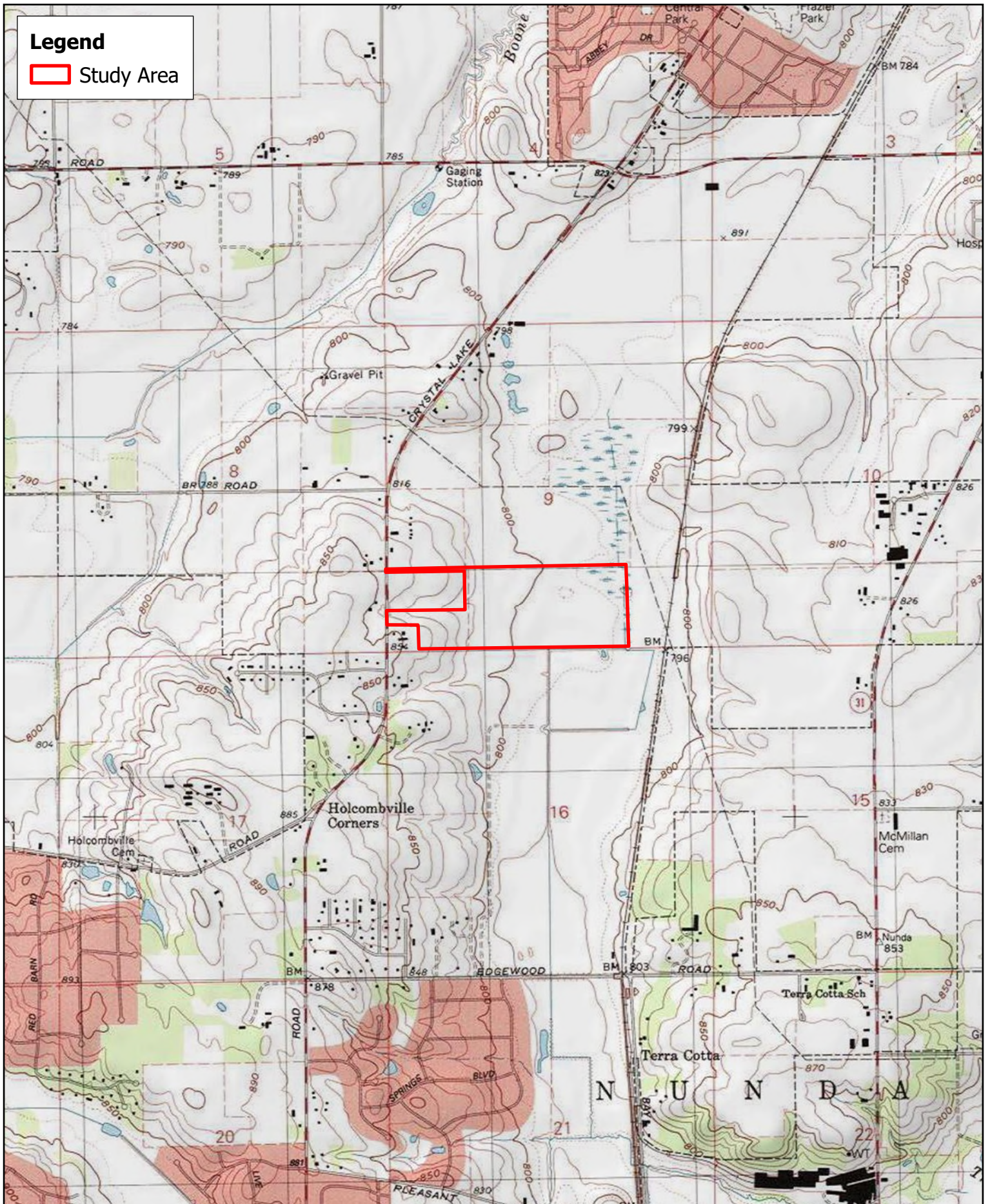


Figure 1. Project Location
 Nunda Township, McHenry County
 TPE IL MH680, LLC



Legend

Study Area

Figure 2. USGS Topographic Map
 Nunda Township, McHenry County
 TPE IL MH680, LLC

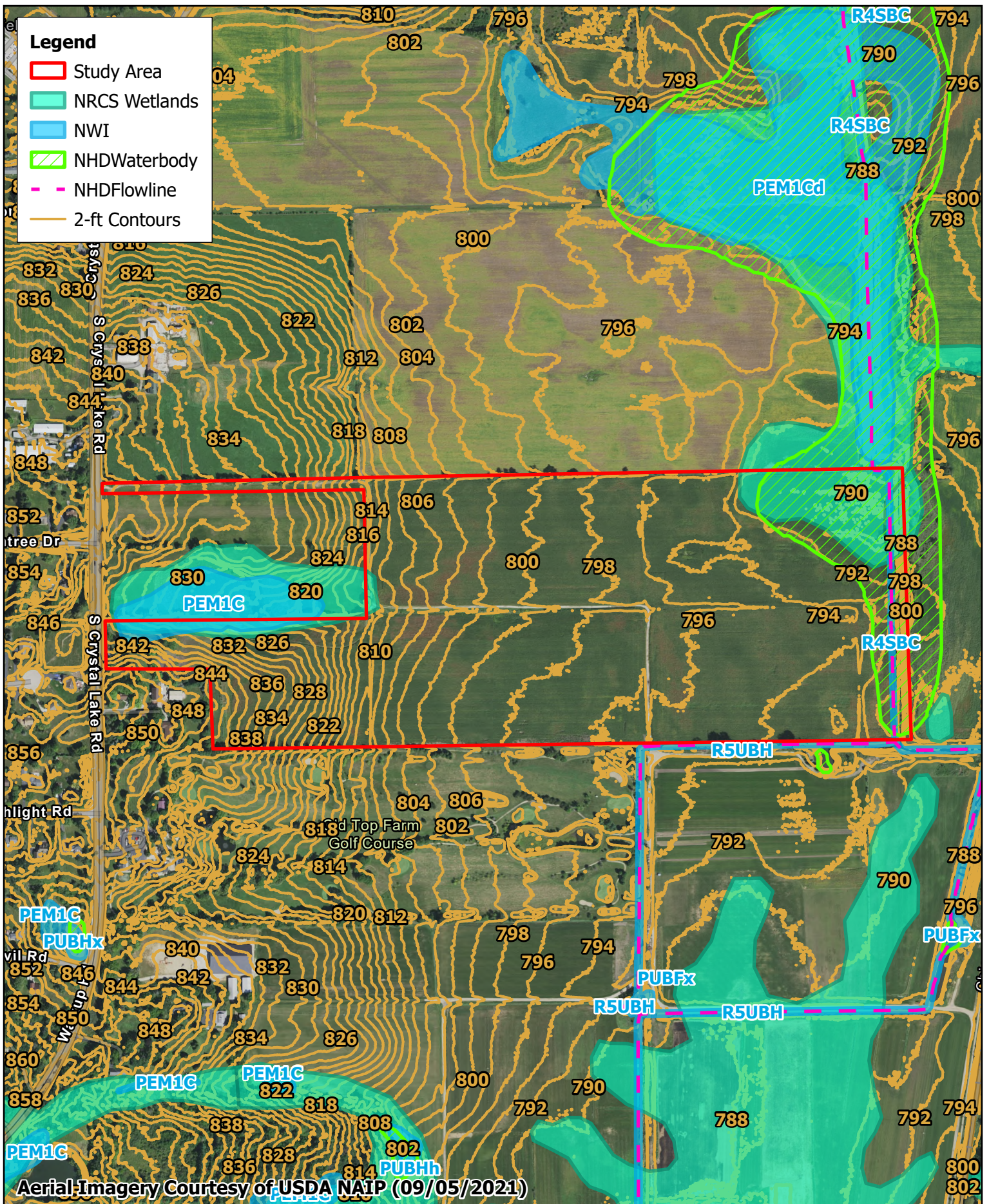


Figure 3. NRCS, NWI, NHD, and 2-ft Contours
 Nunda Township, McHenry County
 TPE IL MH680, LLC

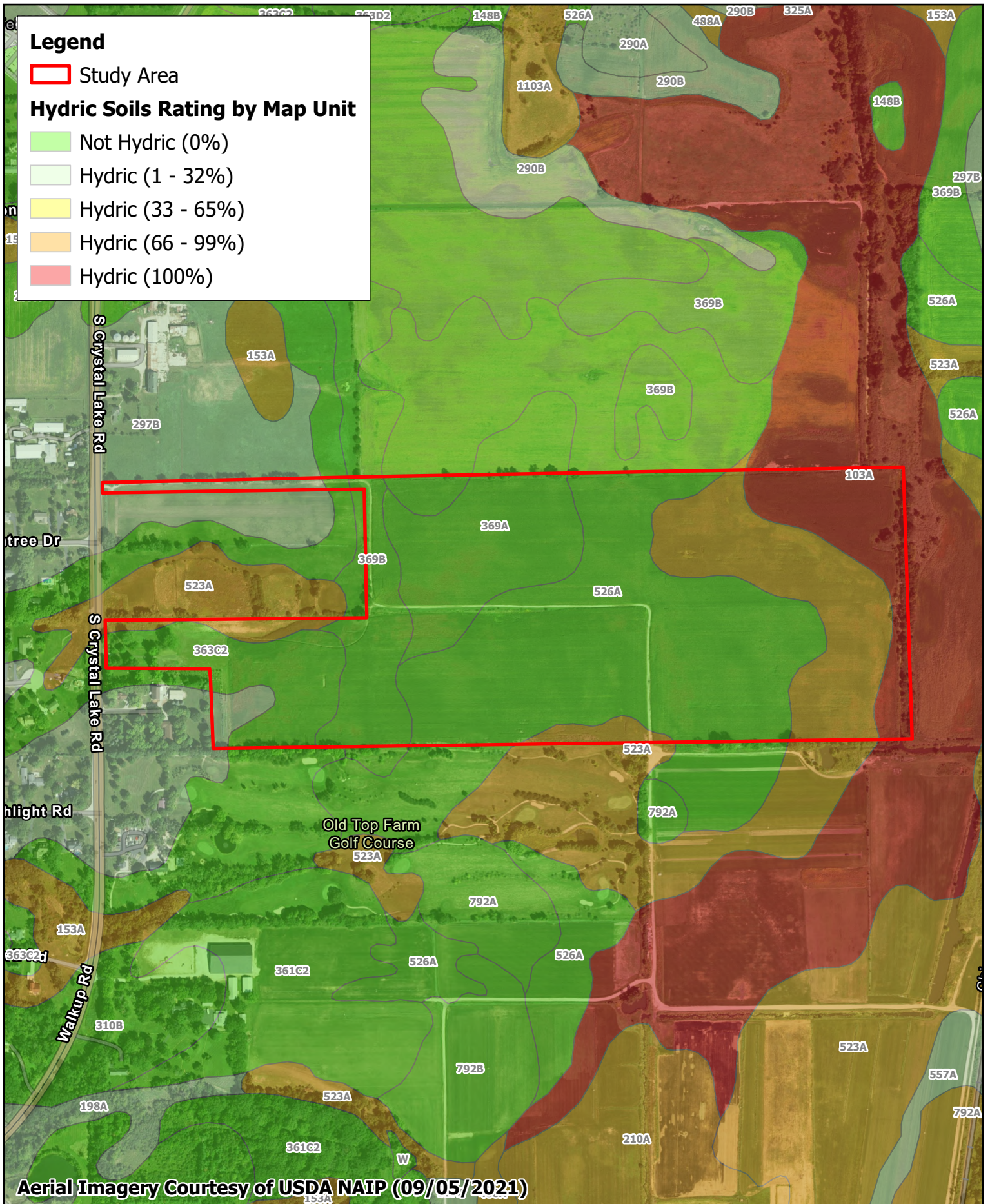
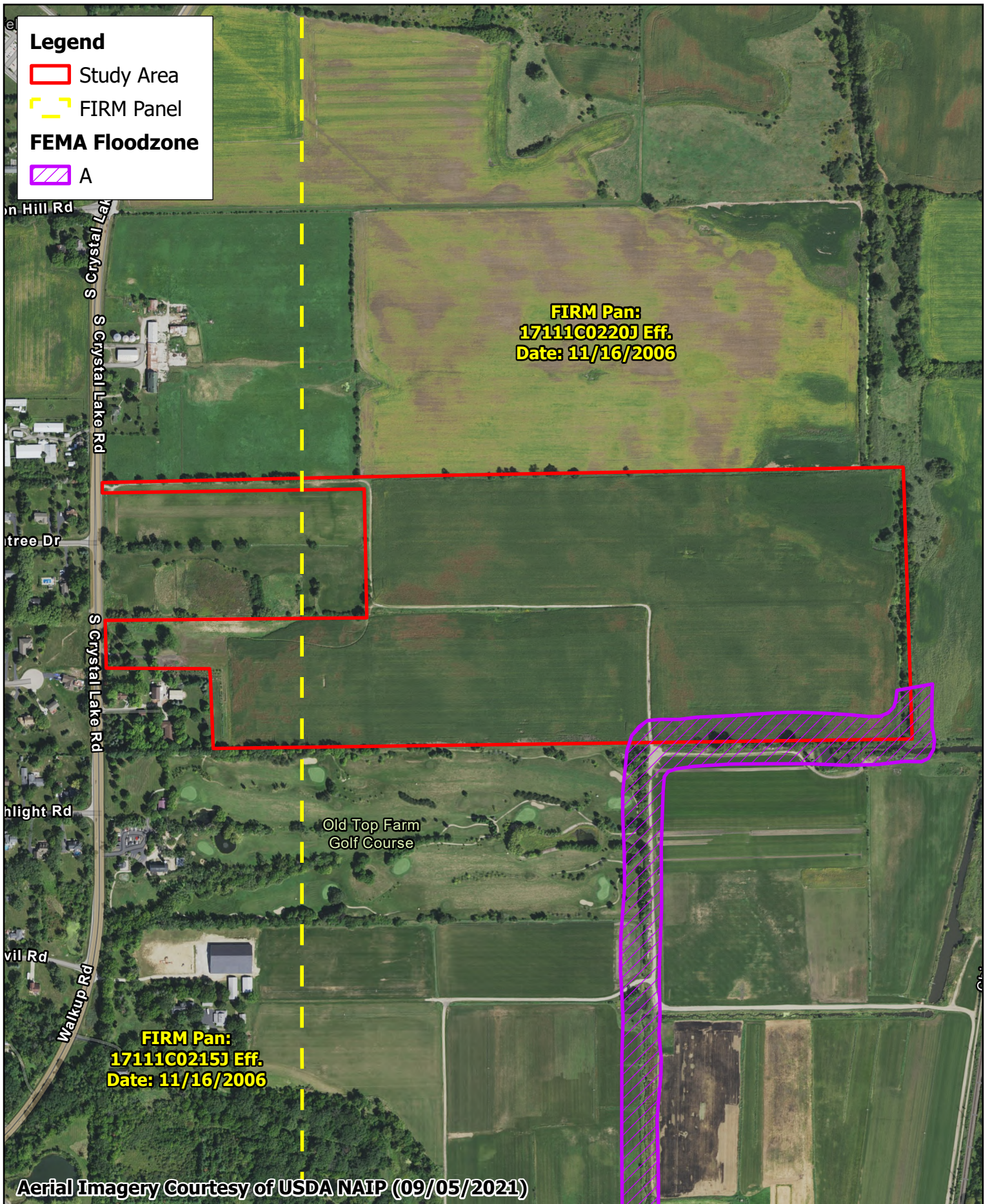


Figure 4. Hydric Soils Rating
 Nunda Township, McHenry County
 TPE IL MH680, LLC



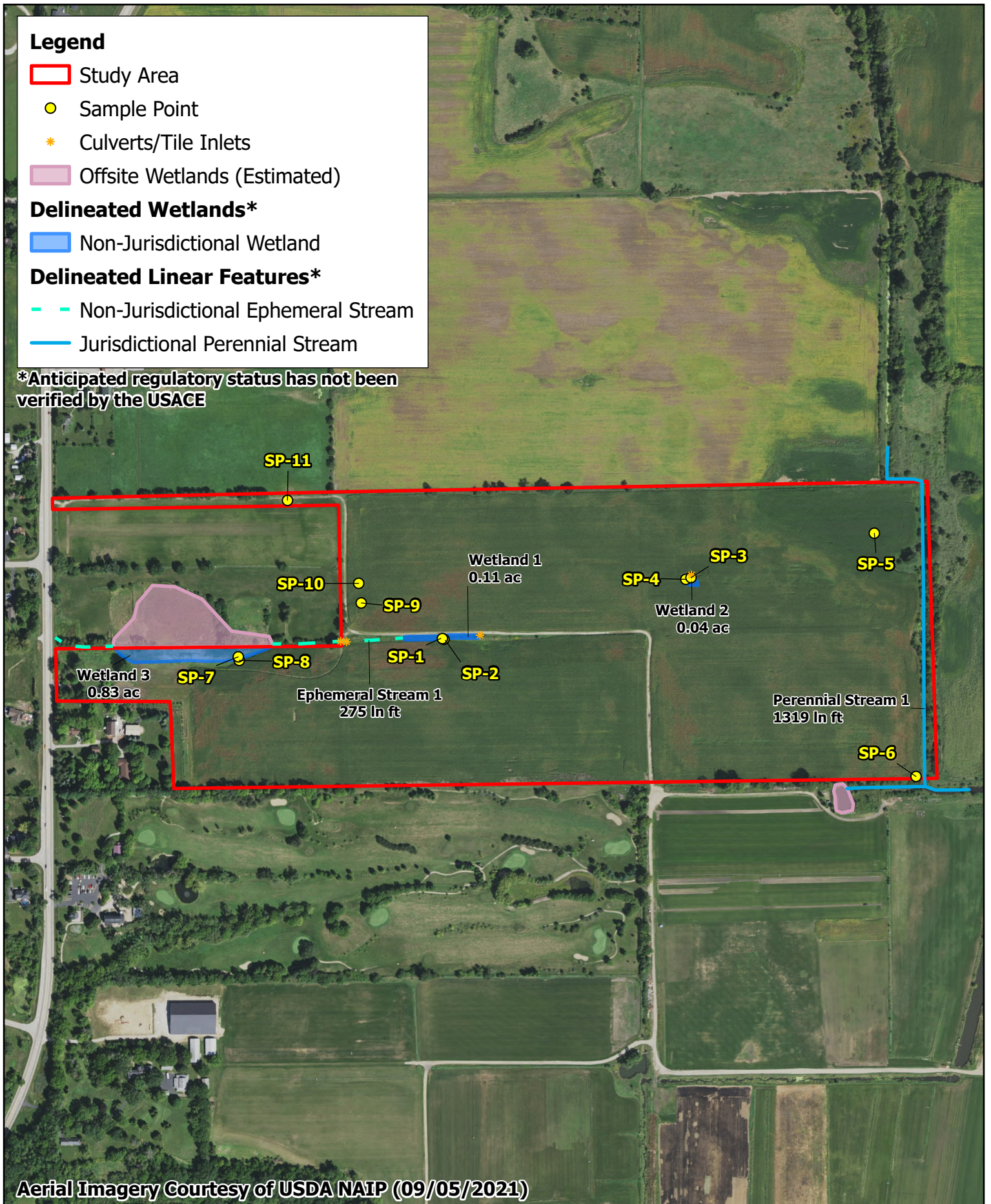


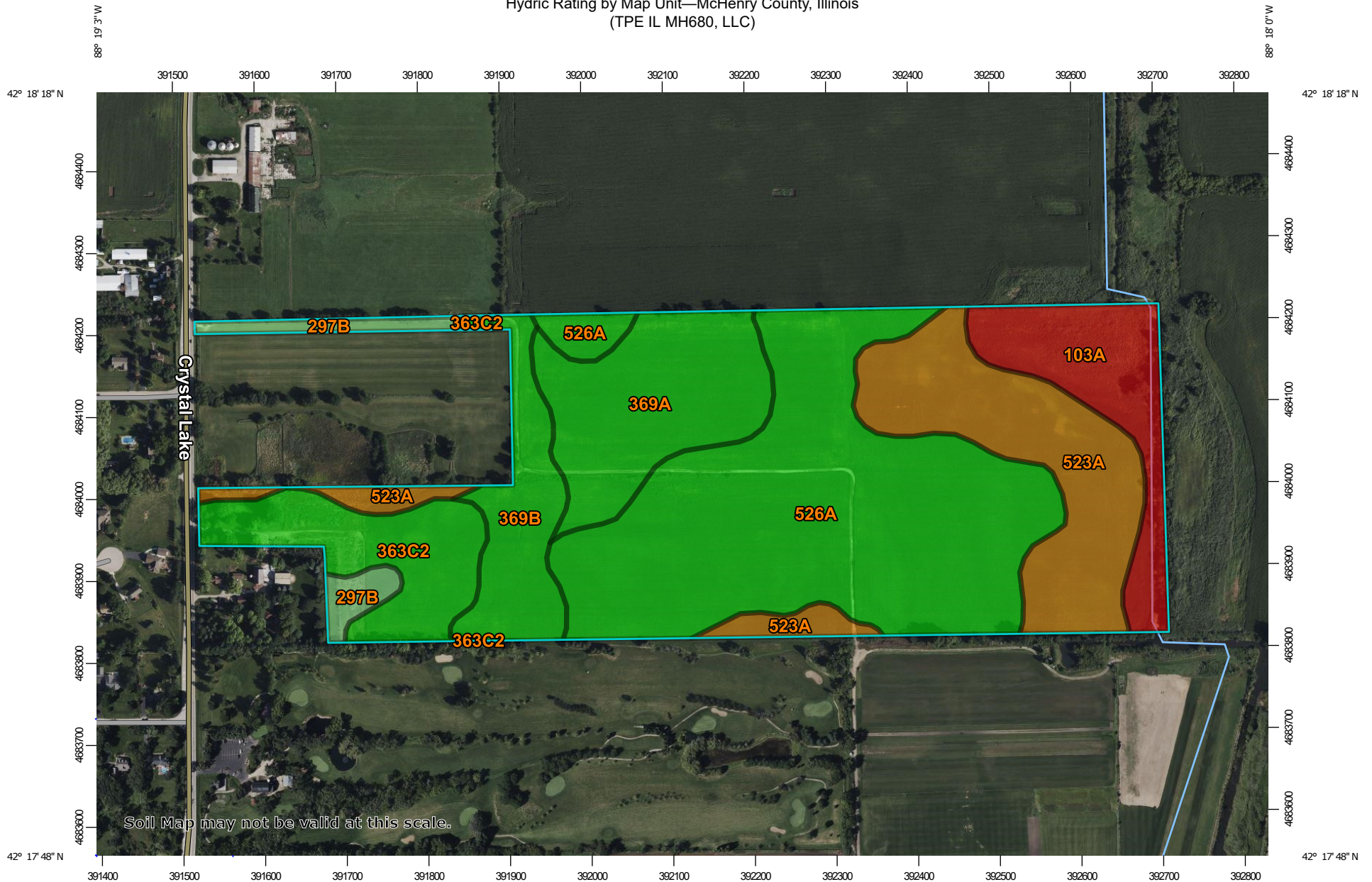
Figure 6. Delineation Summary with Offsite Wetlands

Nunda Township, McHenry County
TPE IL MH680, LLC



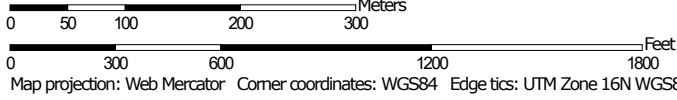
Appendix A: Hydric Soils Information

Hydric Rating by Map Unit—McHenry County, Illinois
(TPE IL MH680, LLC)




Soil Map may not be valid at this scale.

Map Scale: 1:6,560 if printed on A landscape (11" x 8.5") sheet.









MAP LEGEND

Area of Interest (AOI)







 Area of Interest (AOI)

Soils







Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: McHenry County, Illinois
Survey Area Data: Version 20, Aug 21, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 19, 2022—Sep 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
103A	Houghton muck, 0 to 2 percent slopes	100	8.7	9.3%
297B	Ringwood silt loam, 2 to 4 percent slopes	5	2.6	2.7%
363C2	Griswold loam, 4 to 6 percent slopes, eroded	0	8.8	9.3%
369A	Waupecan silt loam, 0 to 2 percent slopes	0	12.3	13.0%
369B	Waupecan silt loam, 2 to 4 percent slopes	0	7.1	7.6%
523A	Dunham silty clay loam, 0 to 2 percent slopes	85	17.6	18.6%
526A	Grundelein silt loam, 0 to 2 percent slopes	0	37.2	39.4%
Totals for Area of Interest			94.2	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

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

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).

References:

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

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Percent Present" returns the cumulative percent composition of all components of a map unit for which a certain condition is true. For example, attribute "Hydric Rating by Map Unit" returns the cumulative percent composition of all components of a map unit where the corresponding hydric rating is "Yes". Conditions may be simple or complex. At runtime, the user may be able to specify all, some or none of the conditions in question.

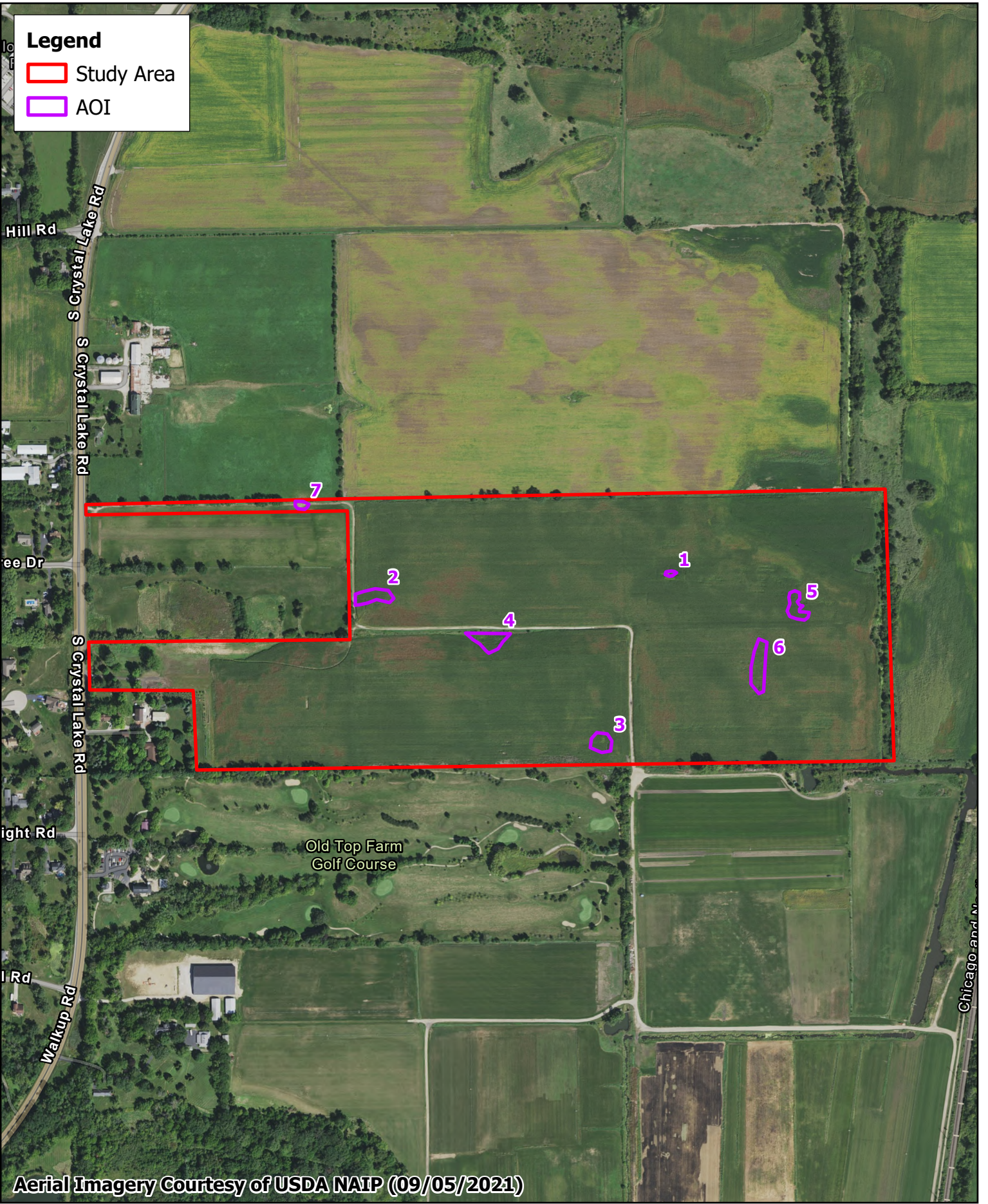
Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Appendix B: Historic Aerial Review



Aerial Imagery Courtesy of USDA NAIP (09/05/2021)

Appendix B. Historic Aerial Review*

Date Image Taken	Climate Condition***	Image Interpretation** (Area of Investigation)						
		1	2	3	4	5	6	7
4/28/1988	Normal	NV	SS	NV	NV	NV	CS	SS
3/21/1999	Normal	NV	NV	NV	NV	NV	CS	SS
3/31/2005	Normal	CS	SS	NV	NV	NV	NV	SS
10/10/2007	Normal	CS	NV	CS	NV	SS	NV	NV
9/14/2011	Normal	AP	NV	NV	NV	NV	NV	NV
5/12/2015	Normal	AP	SS	NV	NV	NV	NV	NV
11/21/2017	Normal	SS	NSS	NSS	NSS	NSS	NSS	NSS
7/6/2018	Wetter than Normal	DO	NV	NV	NV	NV	NV	NV
5/23/2020	Wetter than Normal	SS	SS	SS	SS	NSS	NSS	SS
7/22/2023	Drier than Normal	DO	NV	NV	NV	NV	NV	NV
Number of normal years		7	7	7	7	7	7	7
Number of normal years with wet signatures		5	3	1	0	1	2	4
Percent of normal years with wet signatures		71%	43%	14%	0%	14%	29%	57%
Hydric Soils present		Yes	No	Yes	No	Yes	No	Yes
Identified on NWI		No	No	No	No	No	No	No
Hydrology indicators observed during field review?		Yes	No	No	No	No	No	No
Has wetland signature in 30% or more in normal years?		Yes	Yes	No	No	No	No	Yes
Wetland Present?		Yes	No	No	No	No	No	No
Wetland Number		2	N/A	N/A	N/A	N/A	N/A	N/A

*Methodology for determining the presence of wetland explained in Guidance for Offsite Hydrology/ Wetland Determinations from Minnesota Board of Water and Soil Resources (BWSR) and St Paul District Corps of Engineers (July 1, 2016)

**CS = Crop Stress, NC = Not Cropped, SS = Soil Wetness Signature, SW = Standing Water, AP = Altered Pattern, NV = Normal Vegetative Cover, DO= Drowned Out

***Climate condition based on USACE APT 90-day rolling precipitation total for wetland hydrology determination for the given photo date. Methodology is described in report.

Legend

 Study Area



Aerial Imagery Courtesy of Google Earth

Legend

 Study Area

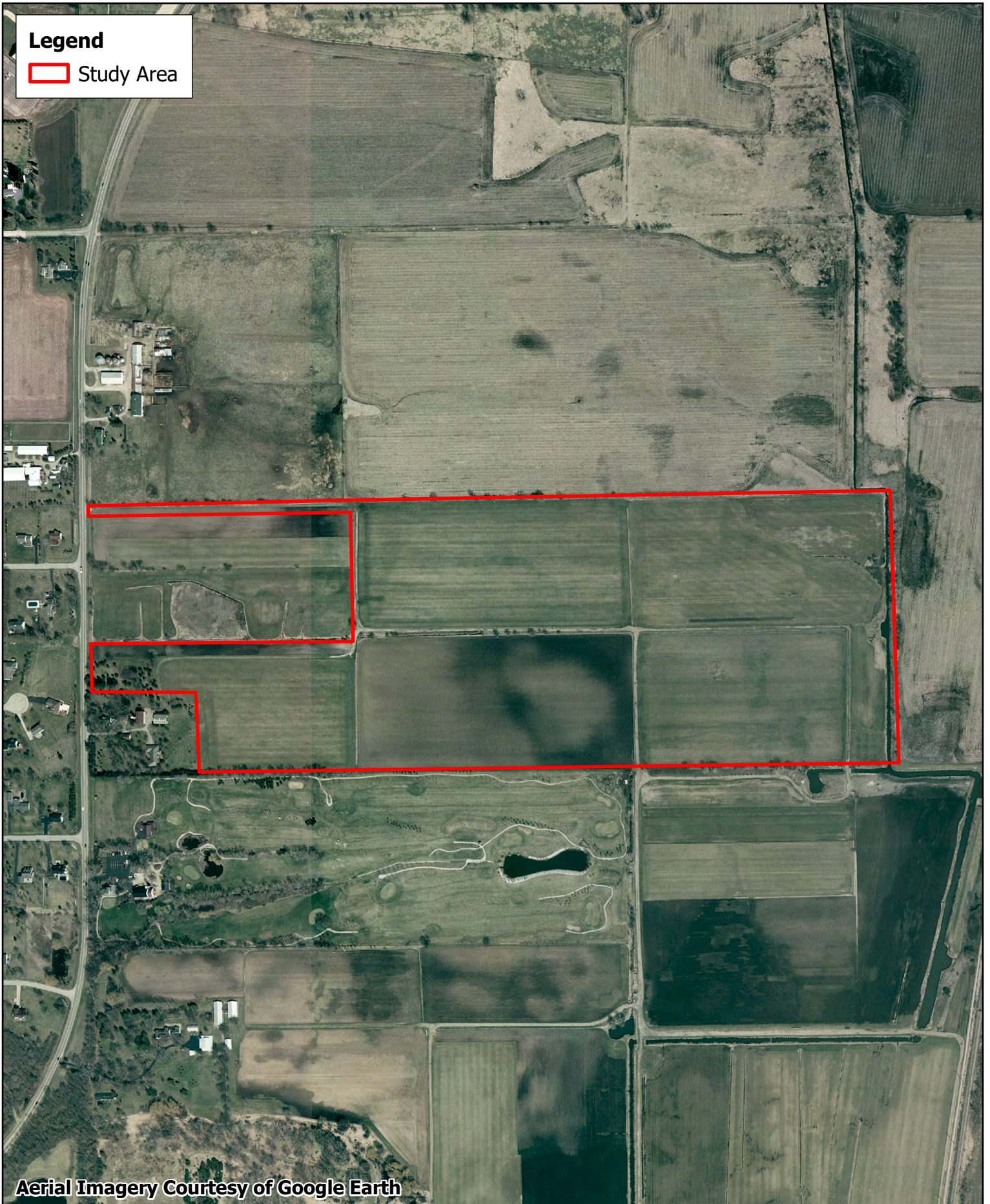


Aerial Imagery Courtesy of Google Earth



Legend

 Study Area



Aerial Imagery Courtesy of Google Earth



Legend

 Study Area

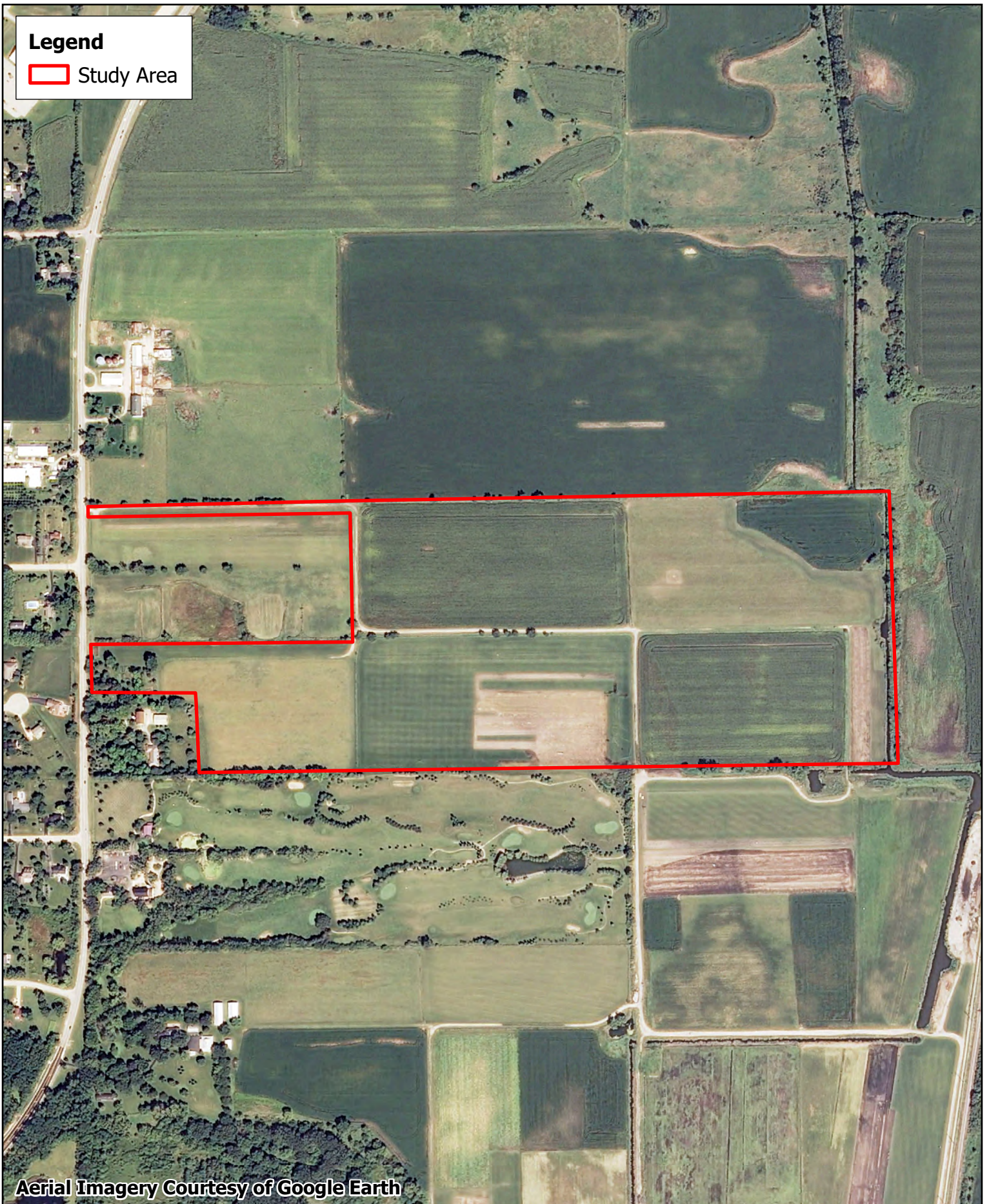


Aerial Imagery Courtesy of Google Earth



Legend

 Study Area

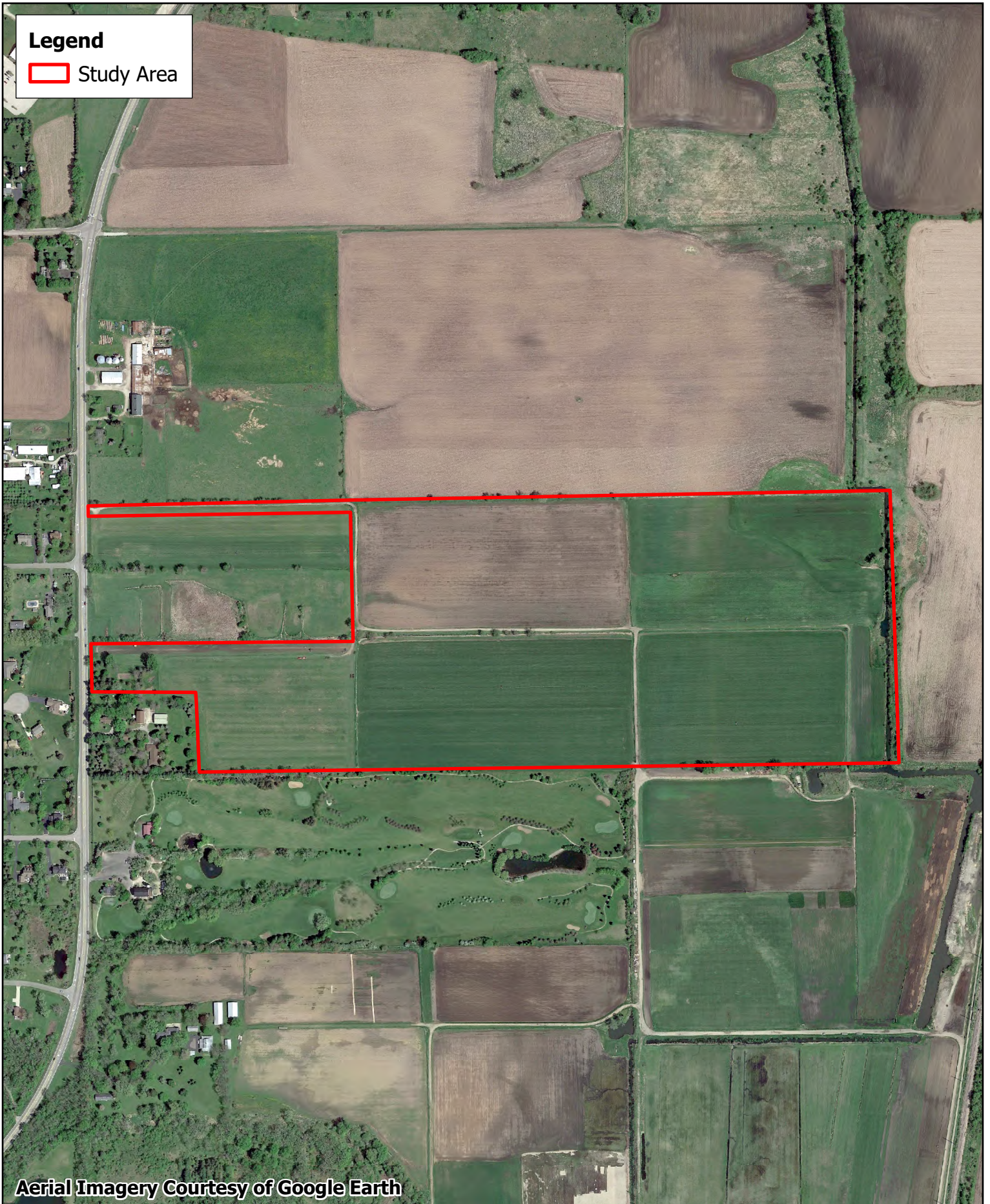


Aerial Imagery Courtesy of Google Earth



Legend

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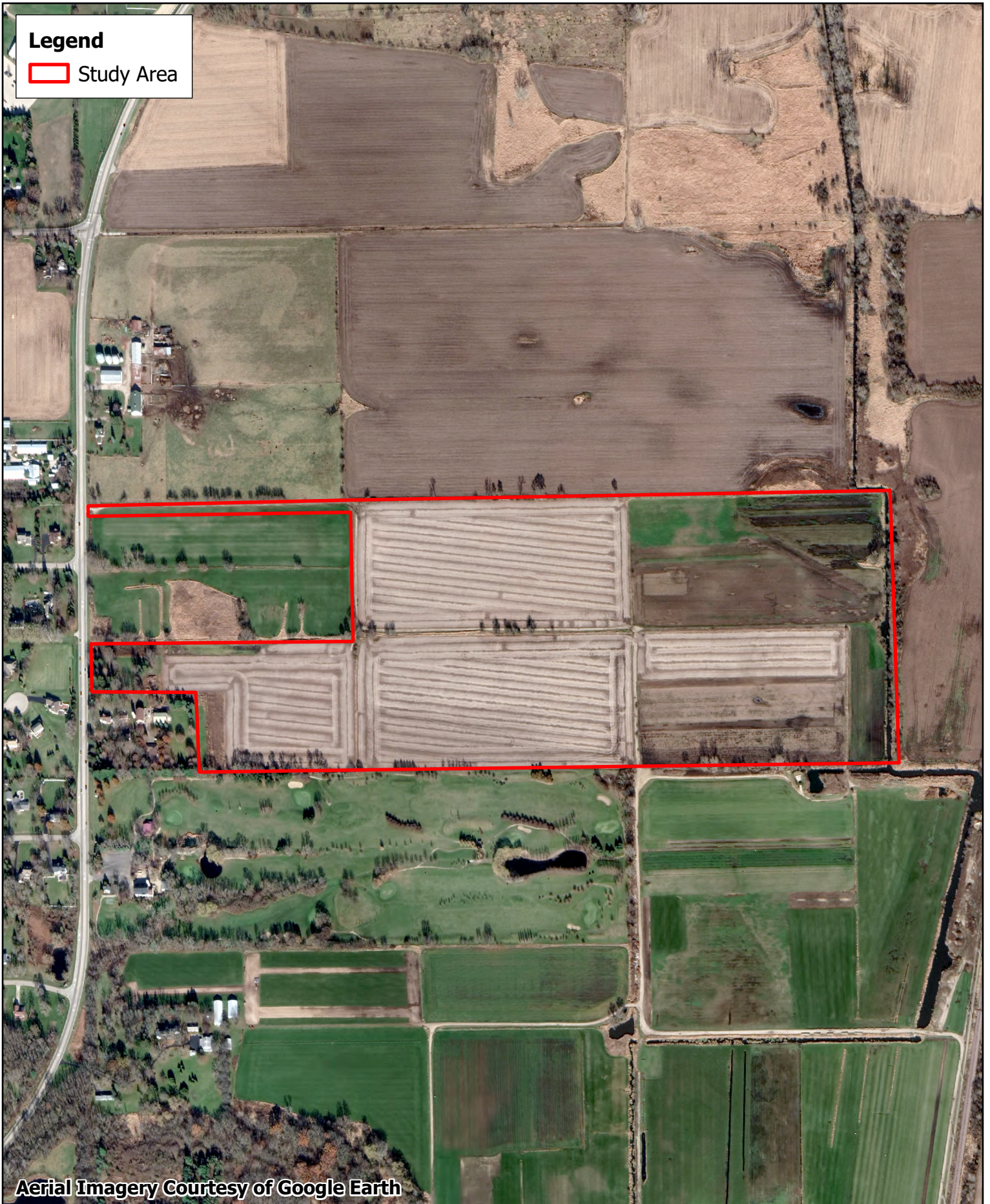


Aerial Imagery Courtesy of Google Earth



Legend

 Study Area

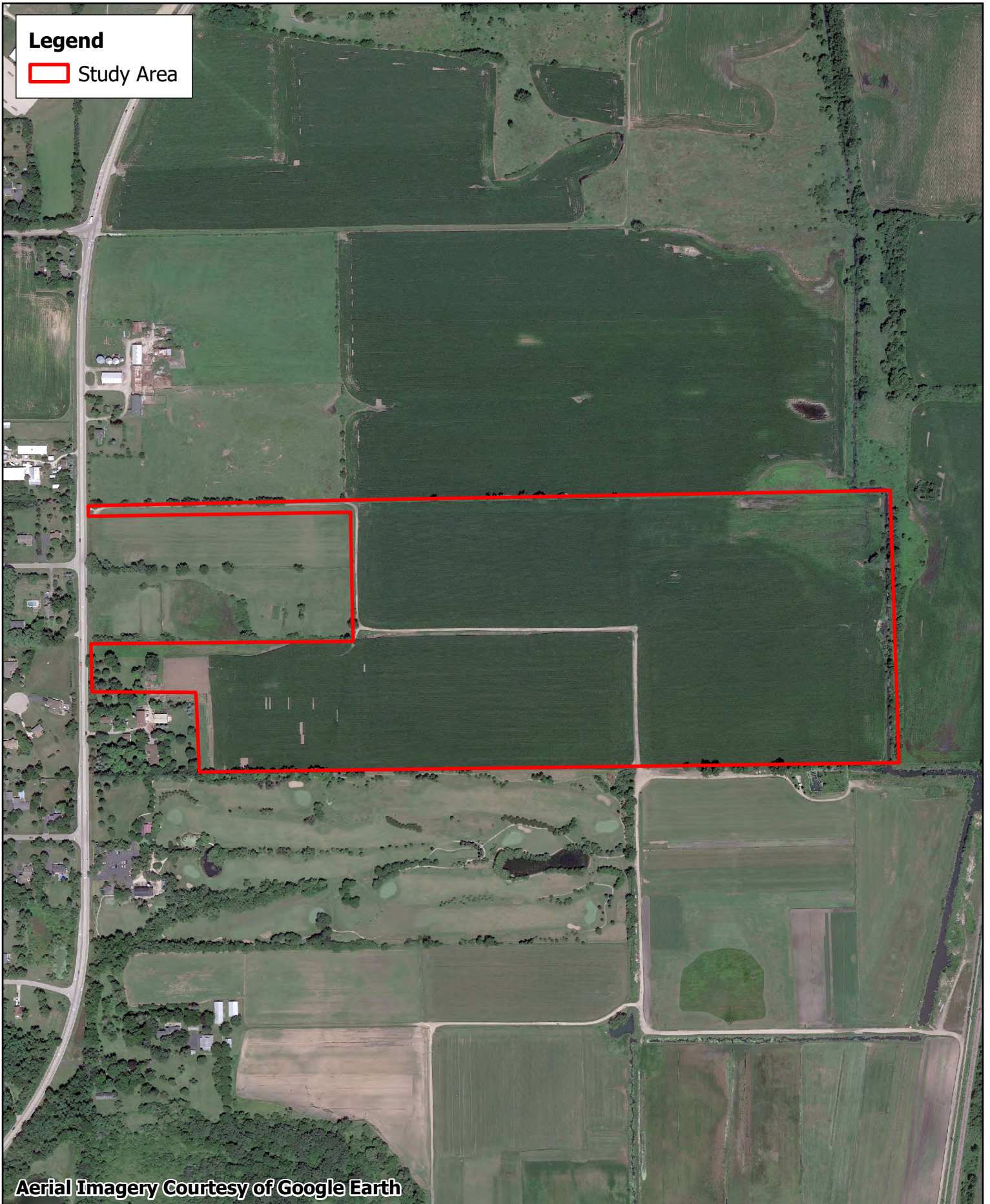


Aerial Imagery Courtesy of Google Earth



Legend

 Study Area

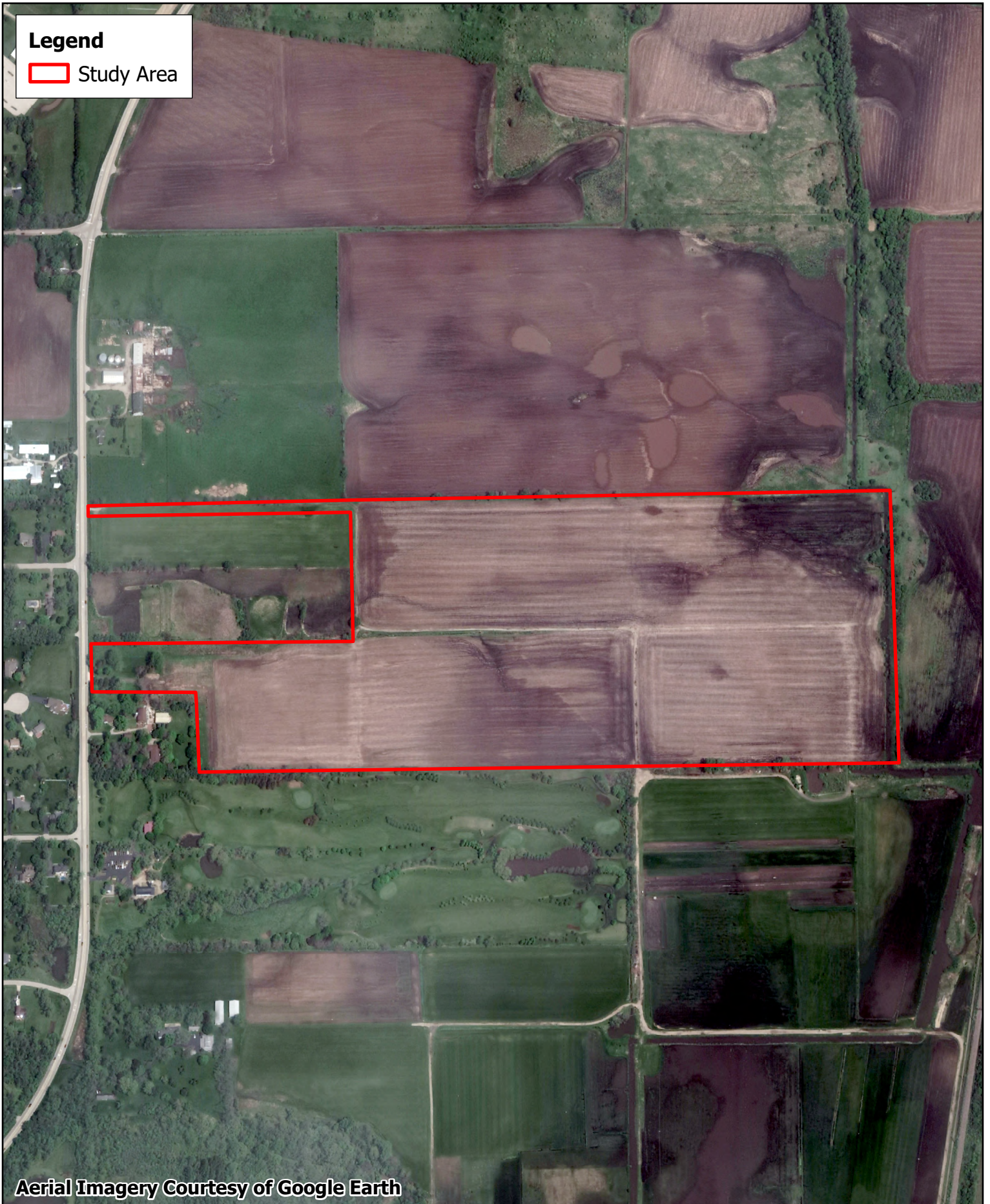


Aerial Imagery Courtesy of Google Earth



Legend

 Study Area

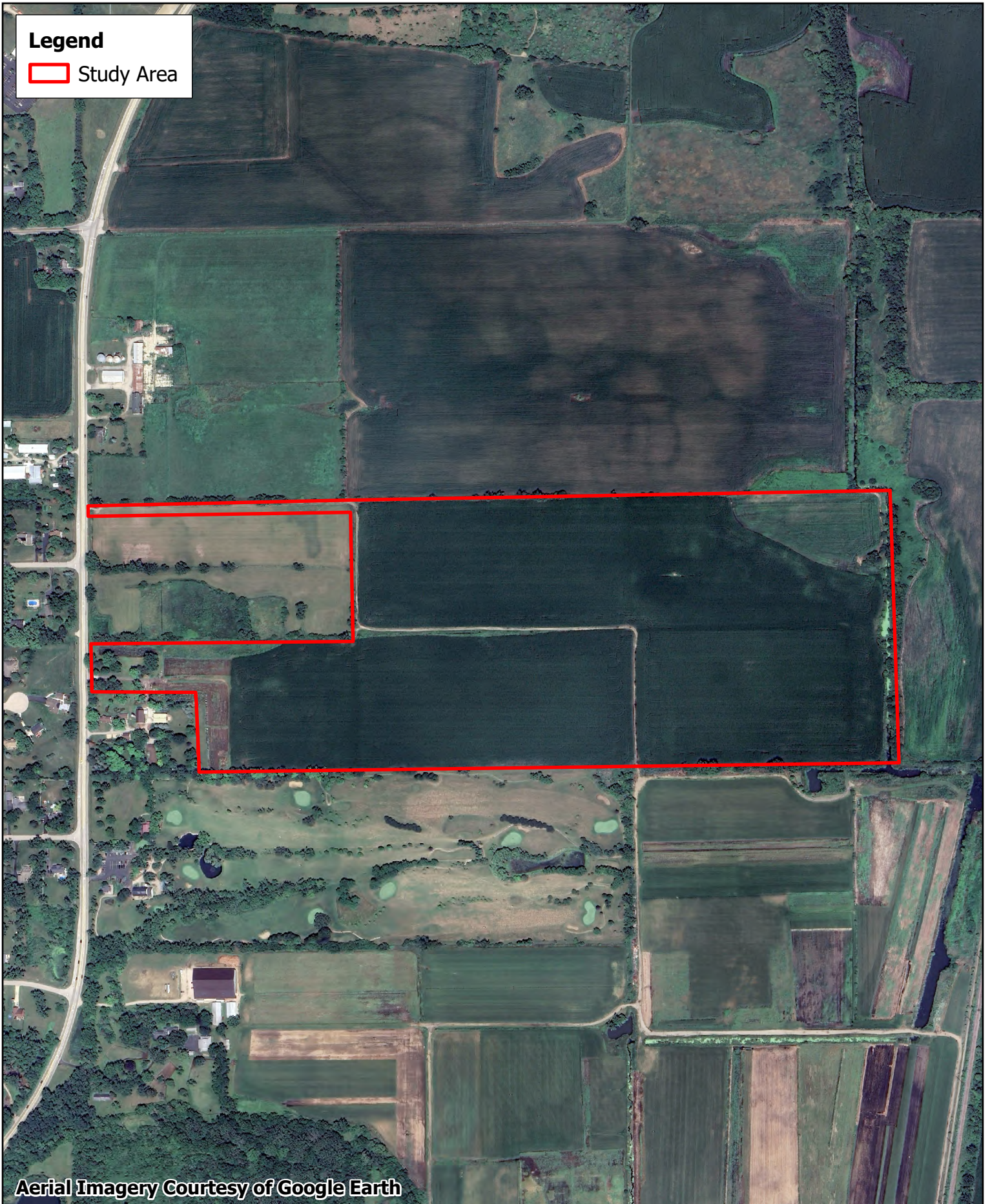


Aerial Imagery Courtesy of Google Earth



Legend

 Study Area

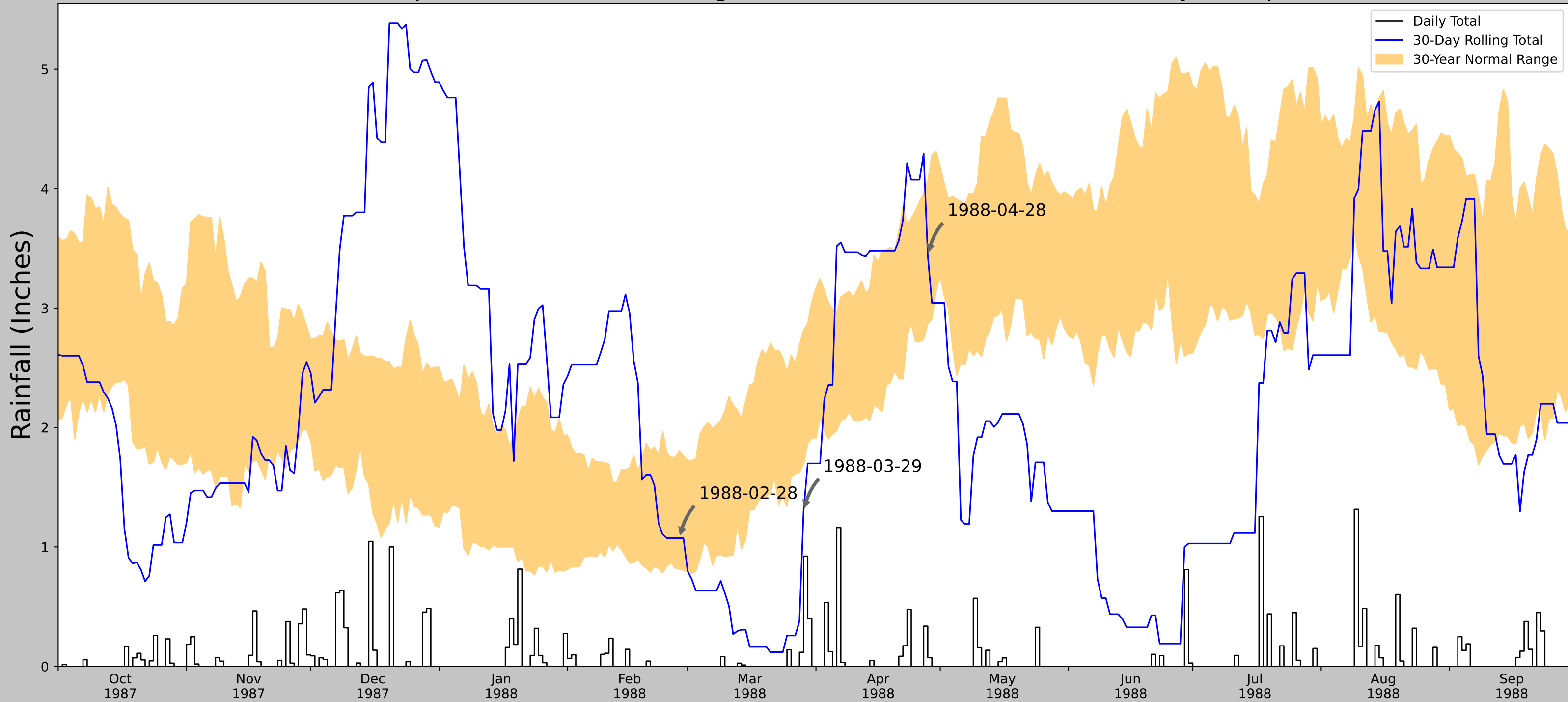


Aerial Imagery Courtesy of Google Earth





Appendix C: Precipitation Data

Antecedent Precipitation vs Normal Range based on NOAA's nClimGrid-Daily Precipitation Data



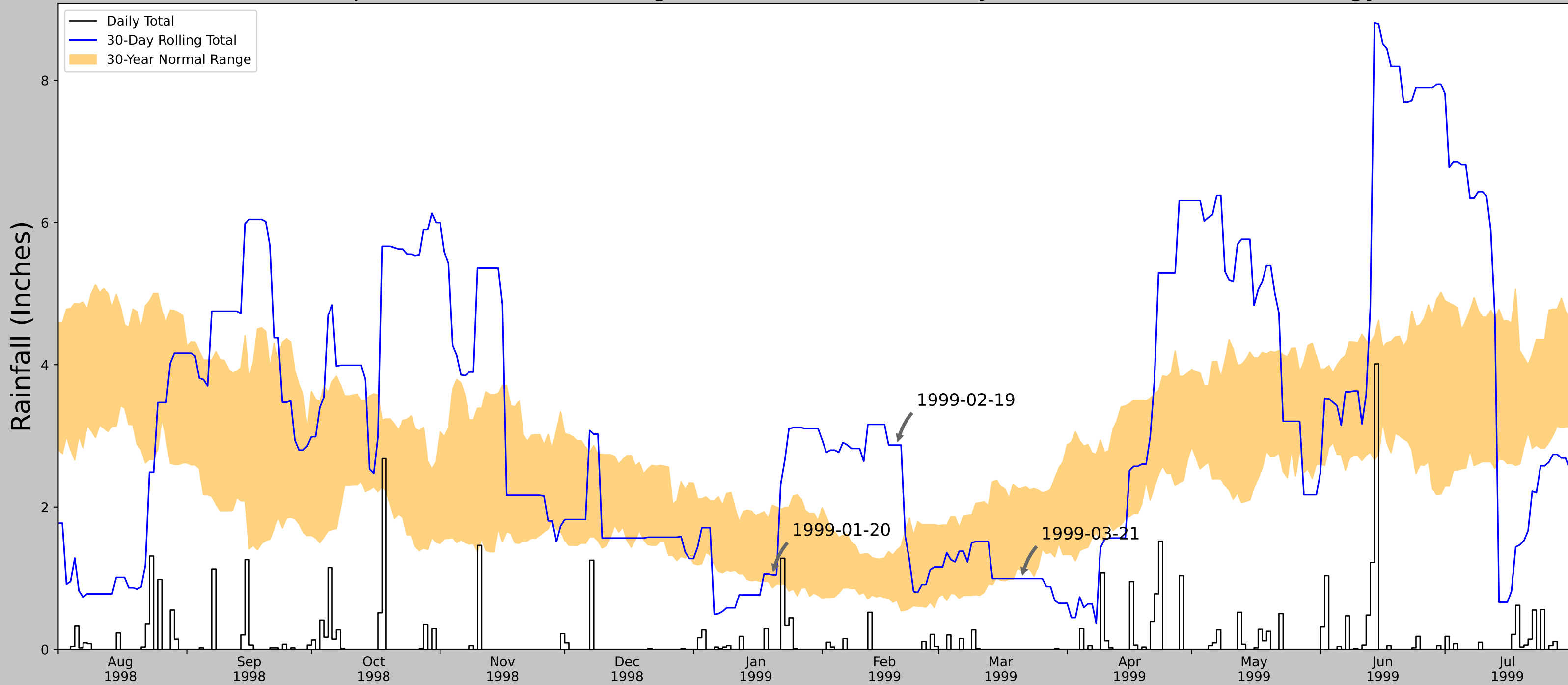
Coordinates	42.30147, -88.31100
Observation Date	1988-04-28
Elevation (ft)	809.147
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
1988-04-28	2.868541	4.055334	3.442729	Normal	2	3	6
1988-03-29	1.692913	2.817114	1.298905	Dry	1	2	2
1988-02-28	0.814038	1.801766	1.073142	Normal	2	1	2
Result							Normal Conditions - 10


 Figures and tables made by the Antecedent Precipitation Tool Version 2.0
 Developed by:
 U.S. Army Corps of Engineers and
 U.S. Army Engineer Research and Development Center



Station Count Summary	
Minimum count of weather stations within 30 miles	3
Mean count of weather stations within 30 miles	6
Median count of weather stations within 30 miles	6
Maximum count of weathers stations within 30 miles	12

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




Coordinates	42.30147, -88.31100
Observation Date	1999-03-21
Elevation (ft)	809.147
Drought Index (PDSI)	Incipient wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
1999-03-21	1.11063	2.258661	0.992126	Dry	1	3	3
1999-02-19	0.688976	1.395276	2.870079	Wet	3	2	6
1999-01-20	0.866929	2.02441	1.043307	Normal	2	1	2
Result							Normal Conditions - 11



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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MCHENRY STRATTON LOCK/DAM	42.3097, -88.2533	735.892	3.003	73.255	1.571	6843	90
CRYSTAL LAKE 4NW	42.2611, -88.3953	931.102	7.998	195.21	5.16	485	0
LIBERTYVILLE 4 NNW	42.3097, -87.9908	720.144	13.413	15.748	6.247	1	0
ANTIOCH	42.4811, -88.0994	750.0	14.21	14.108	6.595	3697	0
LAKE VILLA 2NE	42.4308, -88.0594	839.895	12.961	104.003	7.18	325	0
ELGIN WATER	42.0628, -88.2861	745.079	17.142	9.187	7.871	2	0

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




Coordinates	42.30147, -88.31100
Observation Date	2005-03-31
Elevation (ft)	809.147
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2005-03-31	1.085039	2.772835	0.720472	Dry	1	3	3
2005-03-01	0.805118	1.751575	1.811024	Wet	3	2	6
2005-01-30	0.719291	2.046063	3.425197	Wet	3	1	3
Result							Normal Conditions - 12



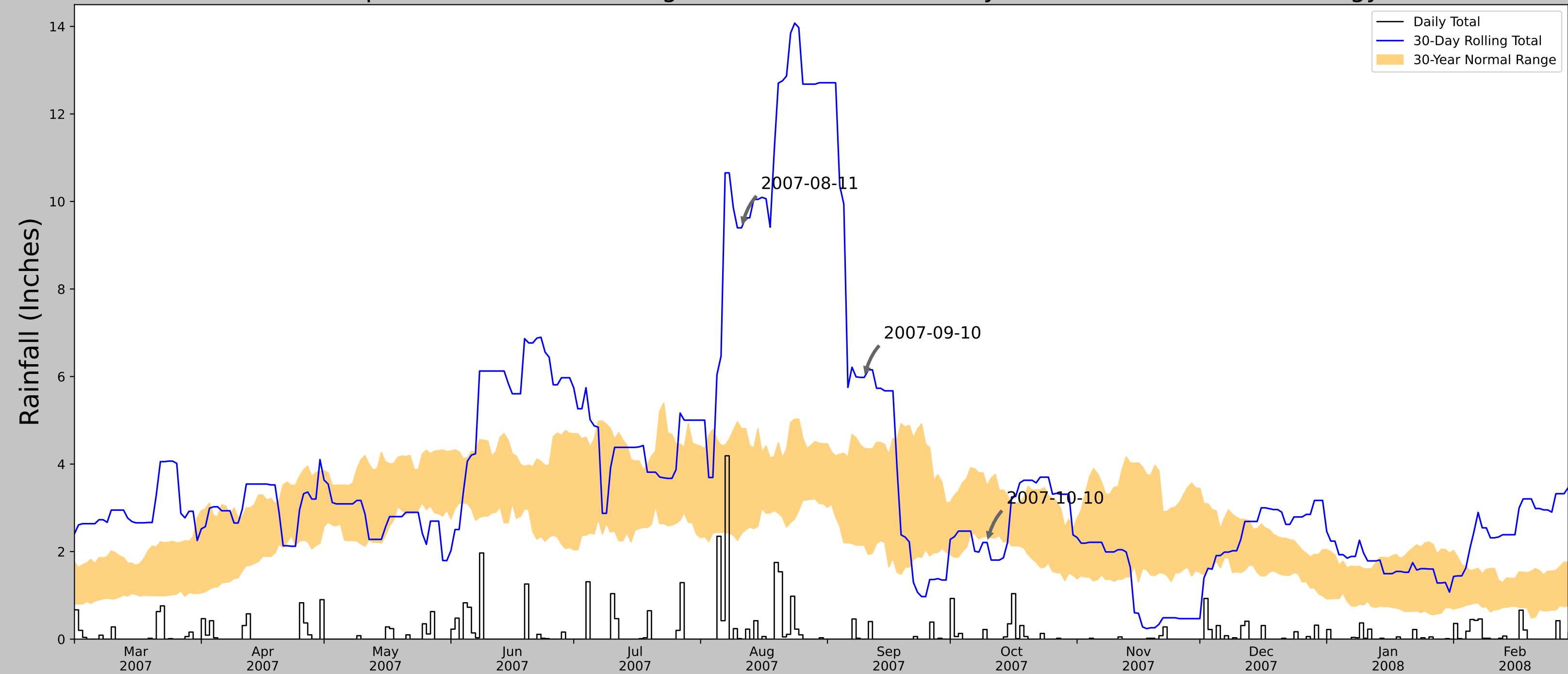
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U.S. Army Engineer Research and
Development Center




Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MCHENRY STRATTON LOCK/DAM	42.3097, -88.2533	735.892	3.003	73.255	1.571	8859	90
CRYSTAL LAKE 4NW	42.2611, -88.3953	931.102	7.998	195.21	5.16	658	0
MUNDELEIN 4WSW	42.2553, -88.0775	839.895	9.741	104.003	5.397	3	0
LIBERTYVILLE 4 NNW	42.3097, -87.9908	720.144	13.413	15.748	6.247	1	0
ANTIOCH	42.4811, -88.0994	750.0	14.21	14.108	6.595	1505	0
LAKE VILLA 2NE	42.4308, -88.0594	839.895	12.961	104.003	7.18	325	0
ELGIN WATER	42.0628, -88.2861	745.079	17.142	9.187	7.871	2	0

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




Coordinates	42.30147, -88.31100
Observation Date	2007-10-10
Elevation (ft)	809.147
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2007-10-10	2.341732	3.501575	2.208661	Dry	1	3	3
2007-09-10	2.14252	4.357874	5.980315	Wet	3	2	6
2007-08-11	2.41063	4.807874	9.397638	Wet	3	1	3
Result							Normal Conditions - 12



Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

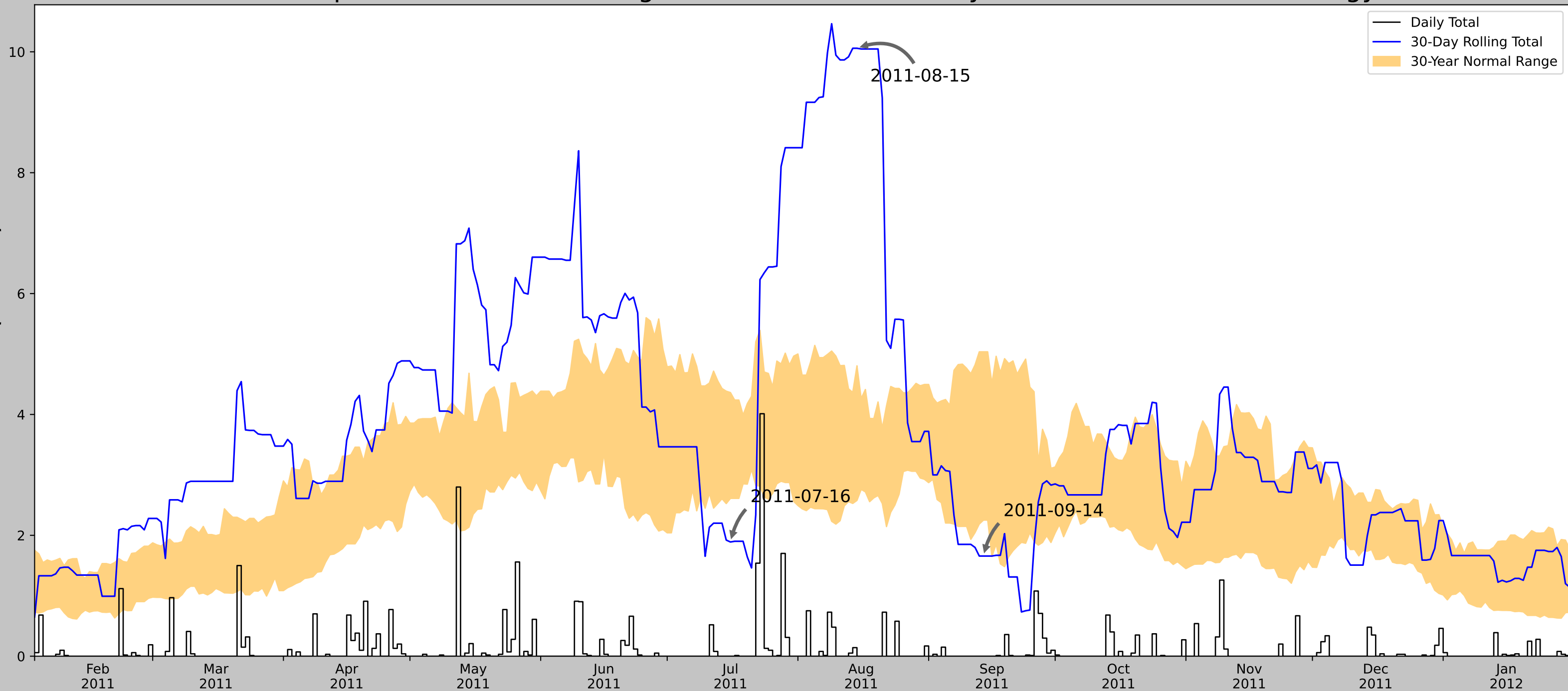
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Development Center



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MCHENRY STRATTON LOCK/DAM	42.3097, -88.2533	735.892	3.003	73.255	1.571	9584	90
CRYSTAL LAKE 4NW	42.2611, -88.3953	931.102	7.998	195.21	5.16	692	0
MUNDELEIN 4WSW	42.2553, -88.0775	839.895	9.741	104.003	5.397	3	0
LIBERTYVILLE 4 NNW	42.3097, -87.9908	720.144	13.413	15.748	6.247	1	0
ANTIOCH	42.4811, -88.0994	750.0	14.21	14.108	6.595	746	0
LAKE VILLA 2NE	42.4308, -88.0594	839.895	12.961	104.003	7.18	325	0
ELGIN WATER	42.0628, -88.2861	745.079	17.142	9.187	7.871	1	0


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

Rainfall (Inches)




Coordinates	42.30147, -88.31100
Observation Date	2011-09-14
Elevation (ft)	809.147
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2011-09-14	2.251575	5.037008	1.65748	Dry	1	3	3
2011-08-15	2.576772	4.805512	10.059055	Wet	3	2	6
2011-07-16	2.611024	4.362599	1.889764	Dry	1	1	1
Result							Normal Conditions - 10



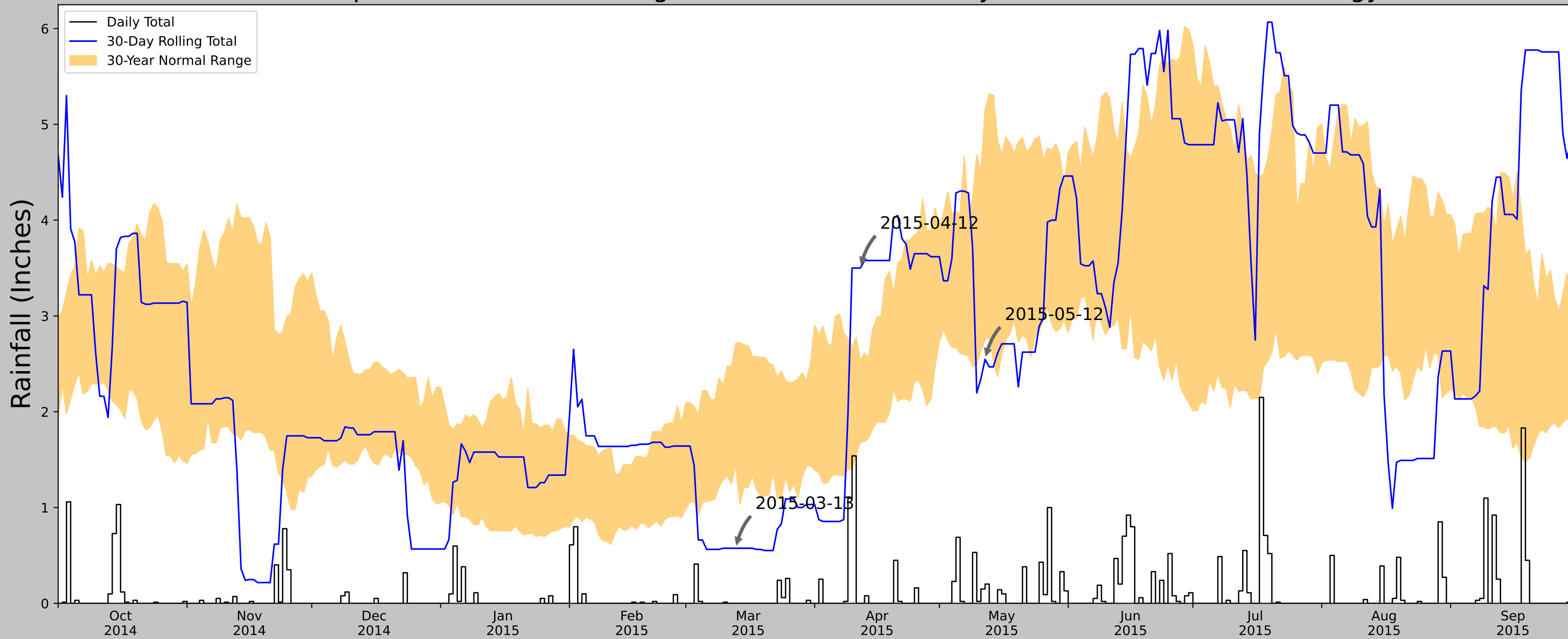
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Development Center



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MCHENRY STRATTON LOCK/DAM	42.3097, -88.2533	735.892	3.003	73.255	1.571	9588	90
CRYSTAL LAKE 4NW	42.2611, -88.3953	931.102	7.998	195.21	5.16	692	0
MUNDELEIN 4WSW	42.2553, -88.0775	839.895	9.741	104.003	5.397	3	0
LIBERTYVILLE 4 NNW	42.3097, -87.9908	720.144	13.413	15.748	6.247	1	0
ANTIOCH	42.4811, -88.0994	750.0	14.21	14.108	6.595	743	0
LAKE VILLA 2NE	42.4308, -88.0594	839.895	12.961	104.003	7.18	325	0
ELGIN WATER	42.0628, -88.2861	745.079	17.142	9.187	7.871	1	0


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



Coordinates	42.30147, -88.31100
Observation Date	2015-05-12
Elevation (ft)	809.147
Drought Index (PDSI)	Incipient wetness
WebWIMP H ₂ O Balance	Wet Season


30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2015-05-12	2.753937	5.144488	2.547244	Dry	1	3	3
2015-04-12	1.67874	2.527559	3.5	Wet	3	2	6
2015-03-13	1.445276	2.711417	0.574803	Dry	1	1	1
Result							Normal Conditions - 10

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MCHENRY STRATTON LOCK/DAM	42.3097, -88.2533	735.892	3.003	73.255	1.571	9855	73
LAKEMOOR 1.9 NW	42.3584, -88.2335	787.074	3.514	51.182	1.761	12	2
ISLAND LAKE 1.1 SSW	42.2613, -88.2072	770.997	4.091	35.105	1.985	8	0
LAKEMOOR 1.5 SE	42.3288, -88.1799	791.011	3.975	55.119	2.008	7	1
PRAIRIE GROVE 1.4 S	42.2595, -88.2676	853.018	3.545	117.126	2.01	6	0
WAUCONDA 2.1 NNE	42.2958, -88.1277	773.95	6.49	38.058	3.167	27	0
PISTAKEE HIGHLANDS 0.4 SW	42.3987, -88.217	796.916	6.423	61.024	3.282	0	3
ROUND LAKE 1.5 WNW	42.3579, -88.1379	780.84	6.77	44.948	3.351	0	3
FOX LAKE 2.4 SE	42.3683, -88.1561	821.85	6.406	85.958	3.433	1	0
CARY 0.3 NE	42.2122, -88.2444	809.055	6.752	73.163	3.532	6	8
CRYSTAL LAKE 4NW	42.2611, -88.3953	931.102	7.998	195.21	5.16	692	0
MUNDELEIN 4WSW	42.2553, -88.0775	839.895	9.741	104.003	5.397	3	0
LIBERTYVILLE 4 NNW	42.3097, -87.9908	720.144	13.413	15.748	6.247	1	0
ANTIOCH	42.4811, -88.0994	750.0	14.21	14.108	6.595	410	0
LAKE VILLA 2NE	42.4308, -88.0594	839.895	12.961	104.003	7.18	325	0



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Version 2.0

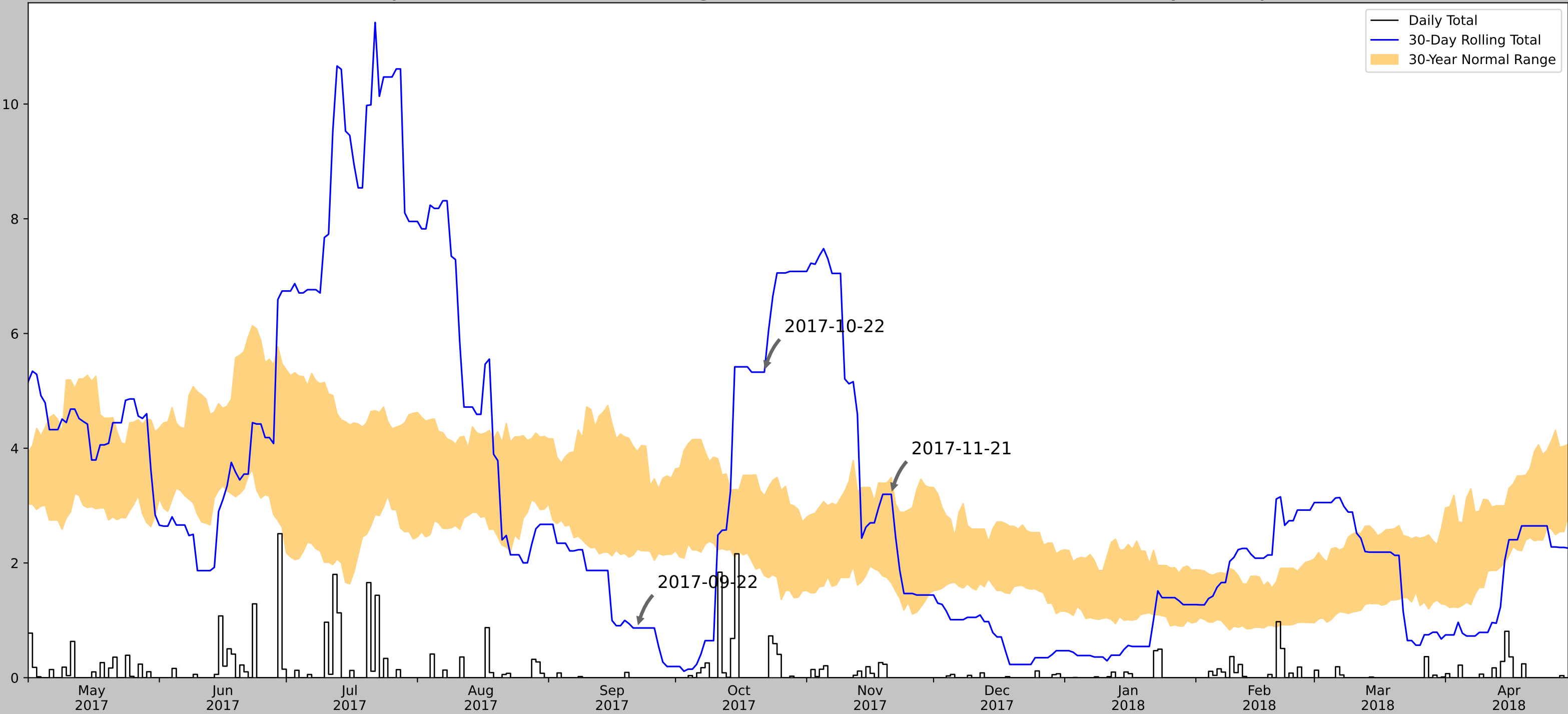
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Development Center



ERDC
ENGINEER RESEARCH & DEVELOPMENT CENTER


Antecedent Precipitation vs Normal Range based on NOAA's nClimGrid-Daily Precipitation Data

Rainfall (Inches)




Coordinates	42.30147, -88.31100
Observation Date	2017-11-21
Elevation (ft)	809.147
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2017-11-21	1.655543	3.488527	3.196974	Normal	2	3	6
2017-10-22	1.779497	3.171168	5.326341	Wet	3	2	6
2017-09-22	2.242833	3.945836	0.866757	Dry	1	1	1
Result							Normal Conditions - 13



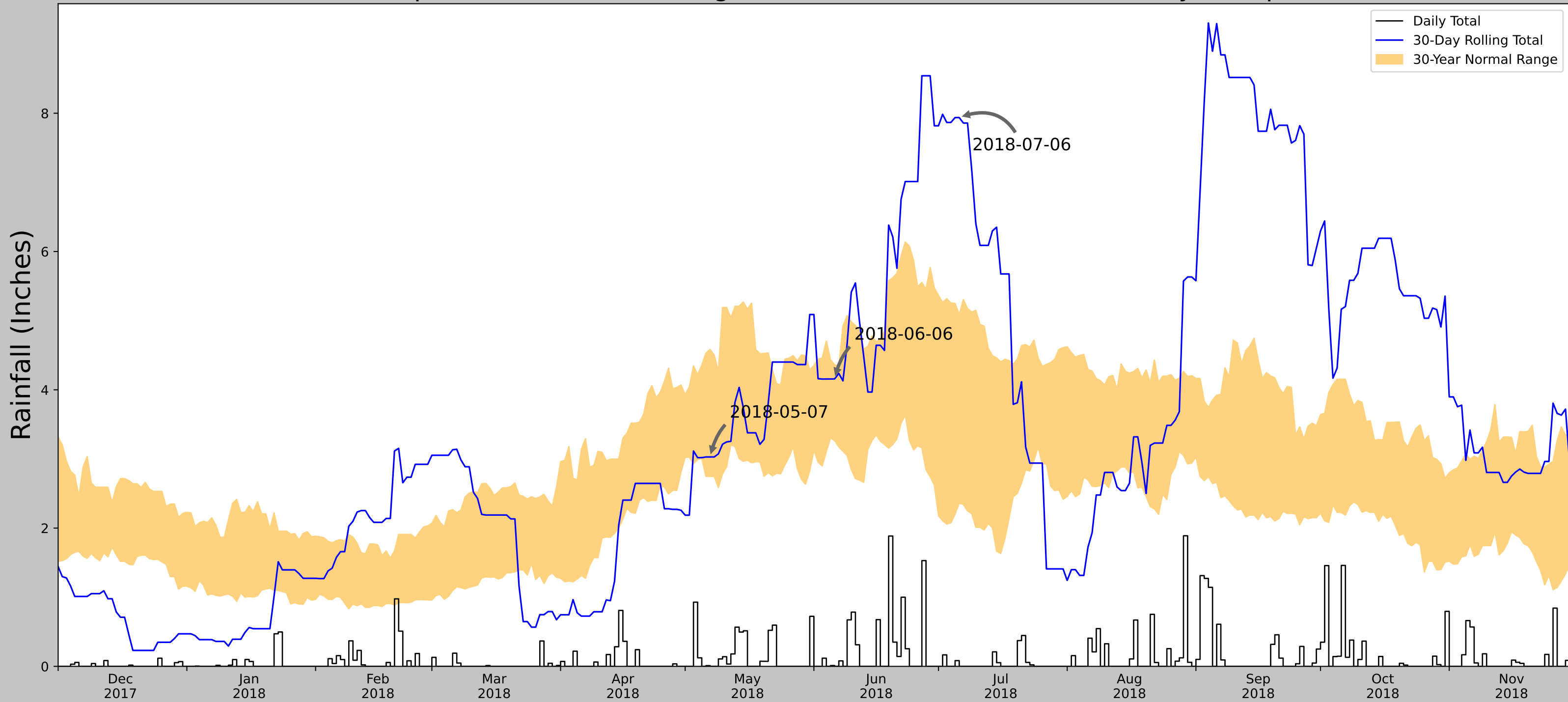
Figures and tables made by the
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Version 2.0

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U.S. Army Engineer Research and
Development Center




	Station Count Summary
Minimum count of weather stations within 30 miles	6
Mean count of weather stations within 30 miles	16
Median count of weather stations within 30 miles	16
Maximum count of weathers stations within 30 miles	21

Antecedent Precipitation vs Normal Range based on NOAA's nClimGrid-Daily Precipitation Data




Coordinates	42.30147, -88.31100
Observation Date	2018-07-06
Elevation (ft)	809.147
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2018-07-06	2.359836	5.091443	7.937685	Wet	3	3	9
2018-06-06	3.262488	4.359837	4.156927	Normal	2	2	4
2018-05-07	2.747017	4.5844	3.028728	Normal	2	1	2
Result							Wetter than Normal - 15



Figures and tables made by the
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Version 2.0

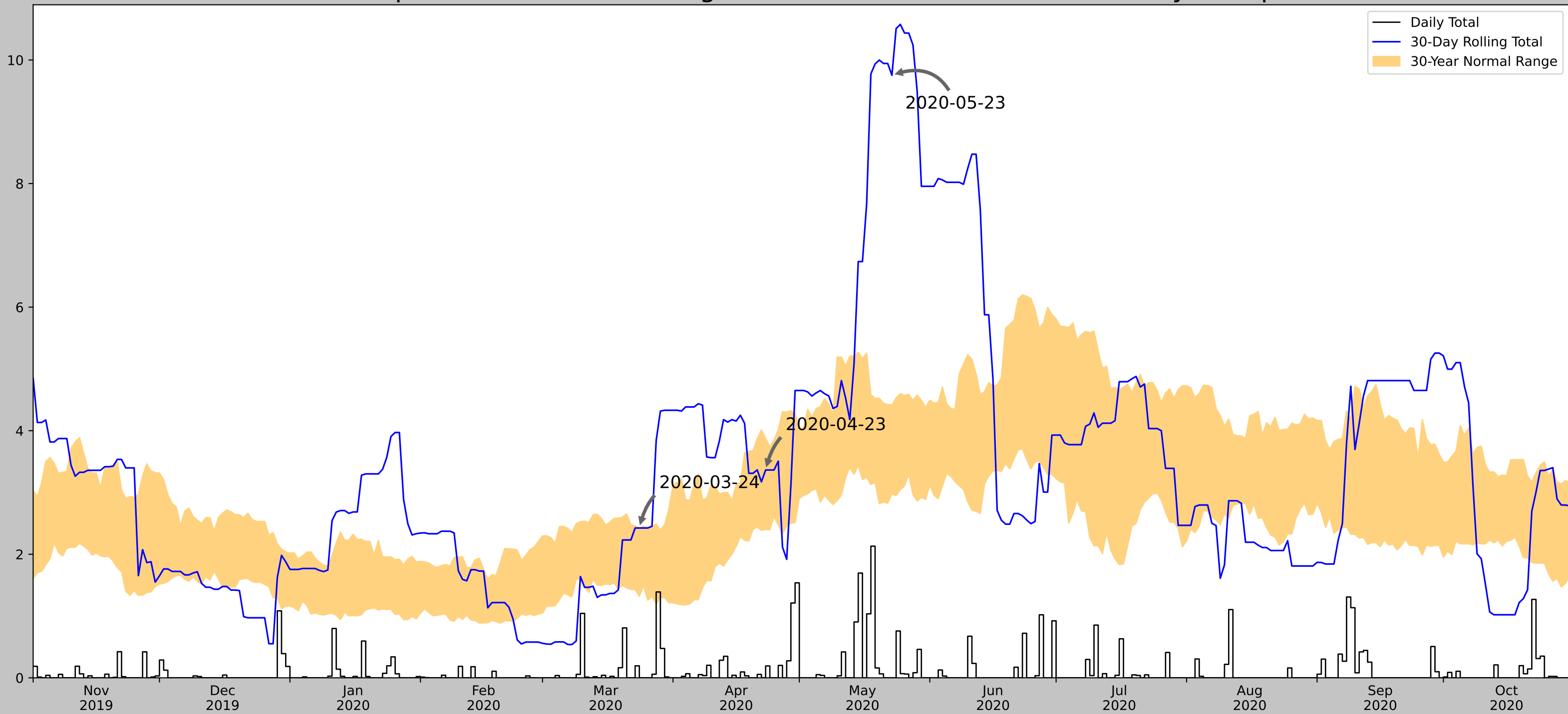
Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



	Station Count Summary
Minimum count of weather stations within 30 miles	6
Mean count of weather stations within 30 miles	16
Median count of weather stations within 30 miles	16
Maximum count of weathers stations within 30 miles	21


Antecedent Precipitation vs Normal Range based on NOAA's nClimGrid-Daily Precipitation Data

Rainfall (Inches)




Coordinates	42.30147, -88.31100
Observation Date	2020-05-23
Elevation (ft)	809.147
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-05-23	2.976778	4.41437	9.752092	Wet	3	3	9
2020-04-23	2.402375	3.876753	3.363681	Normal	2	2	4
2020-03-24	1.321051	2.421537	2.424951	Wet	3	1	3
Result							Wetter than Normal - 16



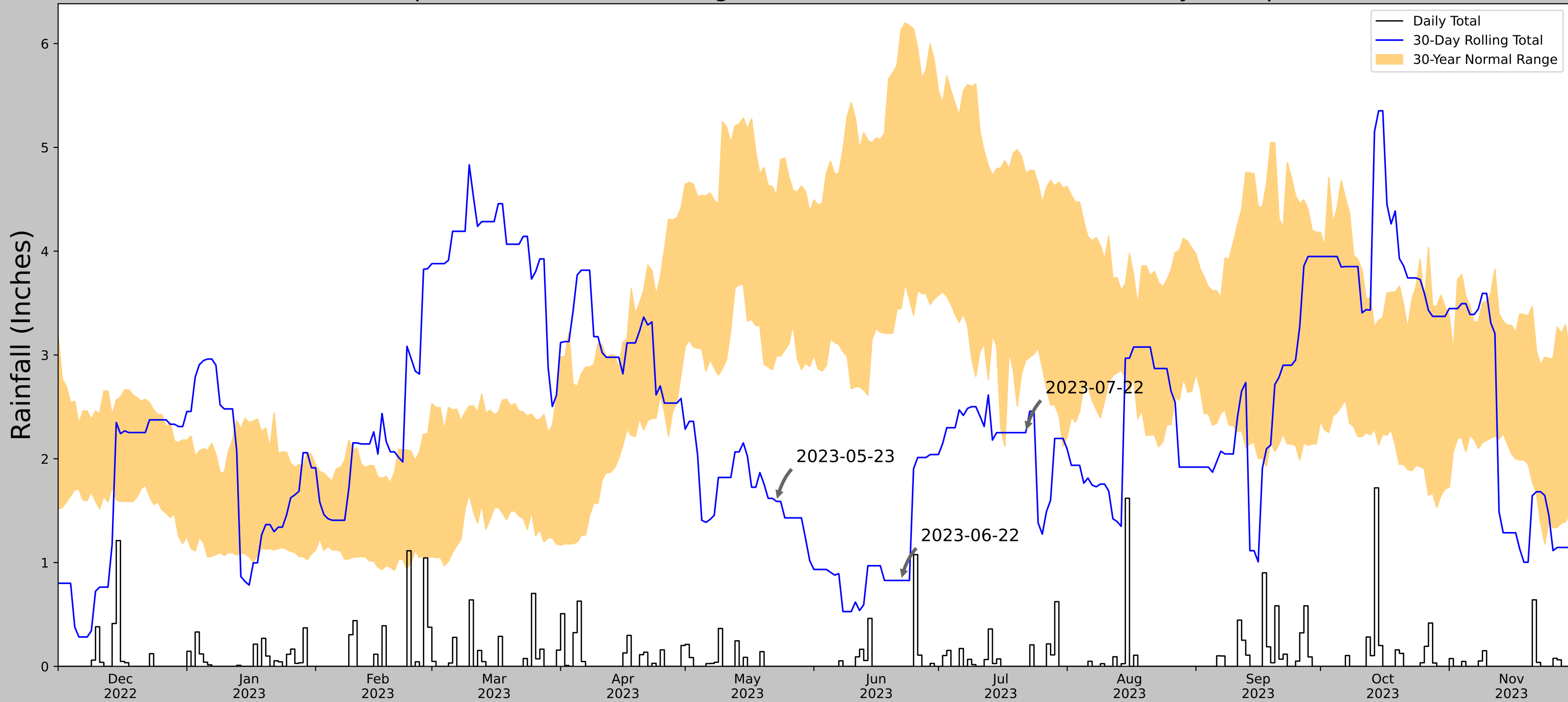
Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center




	Station Count Summary
Minimum count of weather stations within 30 miles	6
Mean count of weather stations within 30 miles	16
Median count of weather stations within 30 miles	16
Maximum count of weathers stations within 30 miles	21

Antecedent Precipitation vs Normal Range based on NOAA's nClimGrid-Daily Precipitation Data




Coordinates	42.30147, -88.31100
Observation Date	2023-07-22
Elevation (ft)	809.147
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-07-22	2.948358	4.750861	2.251476	Dry	1	3	3
2023-06-22	3.449526	6.13272	0.827694	Dry	1	2	2
2023-05-23	2.990557	4.530512	1.589259	Dry	1	1	1
Result							Drier than Normal - 6



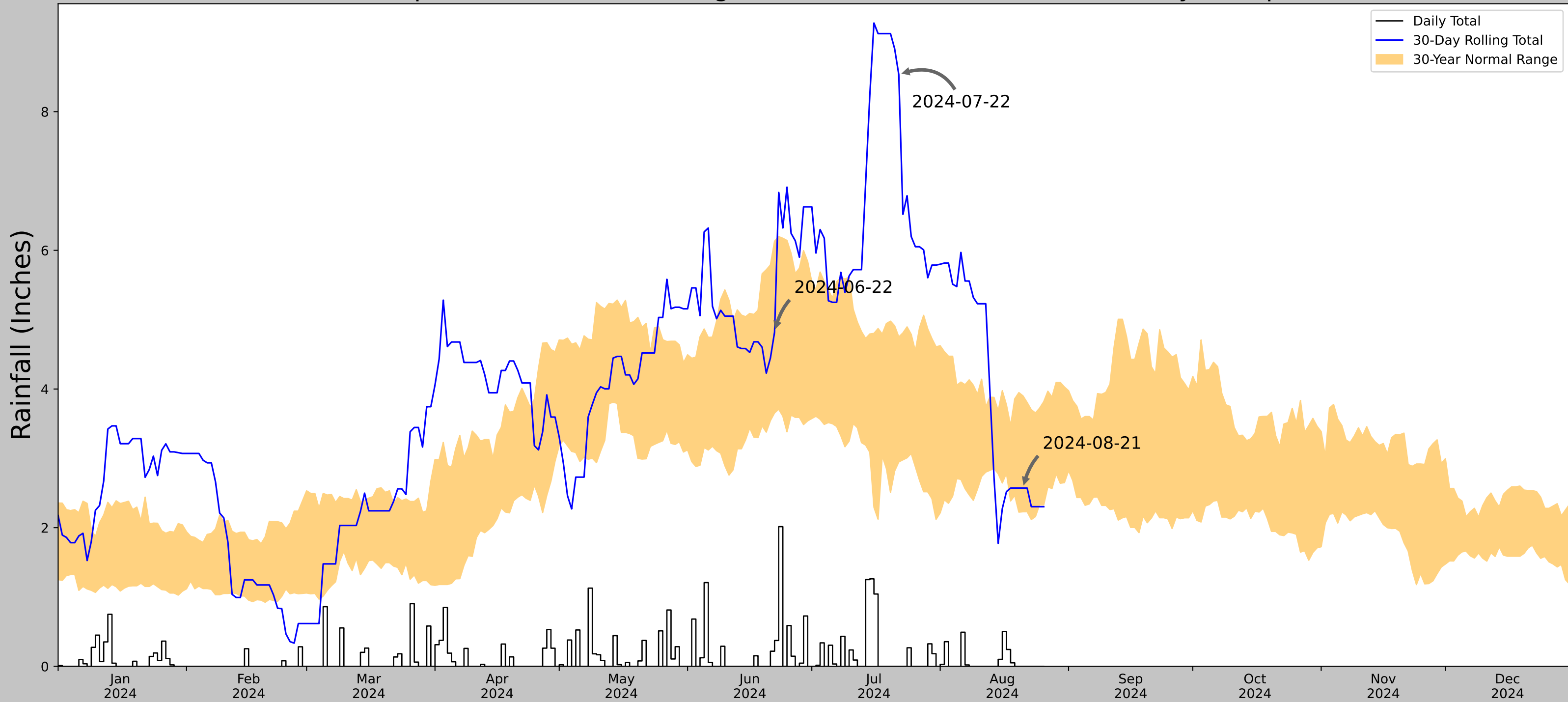
Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center




	Station Count Summary
Minimum count of weather stations within 30 miles	8
Mean count of weather stations within 30 miles	16
Median count of weather stations within 30 miles	16
Maximum count of weathers stations within 30 miles	21

Antecedent Precipitation vs Normal Range based on NOAA's nClimGrid-Daily Precipitation Data




Coordinates	42.30147, -88.31100
Observation Date	2024-08-21
Elevation (ft)	809.147
Drought Index (PDSI)	Mild wetness (2024-07)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-21	2.230038	3.900437	2.571051	Normal	2	3	6
2024-07-22	2.948358	4.750861	8.53408	Wet	3	2	6
2024-06-22	3.655389	6.13272	4.820067	Normal	2	1	2
Result							Normal Conditions - 14



Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



	Station Count Summary
Minimum count of weather stations within 30 miles	9
Mean count of weather stations within 30 miles	16
Median count of weather stations within 30 miles	16
Maximum count of weathers stations within 30 miles	21

Appendix D: Field Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-1
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR or MLRA): L 95 Lat: 42.30091328 Long: -88.3096817 Datum: WGS 84
 Soil Map Unit Name: 369A - Waupecan silt loam, 0 to 2 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
--	--

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

Sample point located in ditch containing wetland plants and standing water.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ 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) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
---	---

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
--	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Leersia oryzoides</u>	<u>75</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
2. <u>Physalis longifolia</u>	<u>5</u>		<u>FACU</u>	
3. <u>Verbena hastata</u>	<u>5</u>		<u>FACW</u>	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>85</u>			_____ = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1.				
2.				
3.				
4.				
				_____ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.)				

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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>85</u> (A)	<u>105</u> (B)

Prevalence Index = B/A = 1.23

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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

SOIL

Sampling Point: SP-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 13	10YR 2/1	100					Sandy Clay Loam	
13 - 18	10YR 2/1	90	2.5Y 5/6	7	C	M	Sandy Clay Loam	
13 - 18			7.5YR 2.5/3	3	C	M	Sandy Clay Loam	
18 - 25	2.5Y 4/1	80	10YR 3/3	20	C	M	Sandy Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-2
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR or MLRA): L 95 Lat: 42.30089787 Long: -88.309662 Datum: WGS 84
 Soil Map Unit Name: 369A - Waupecan silt loam, 0 to 2 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Berm located approximately 4 feet above the ditch wetland.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-2

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5 ft r</u>)				
1.	<u>30</u>	✓	FACU	
2.	<u>25</u>	✓	FACU	
3.	<u>25</u>	✓	FACU	
4.	<u>15</u>		FACU	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>95</u>			_____ = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1.				
2.				
3.				
4.				
				_____ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.)				

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>95</u>	x 4 = <u>380</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>380</u> (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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

SOIL

Sampling Point: SP-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 16	10YR 3/3	100					Sandy Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

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

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 16

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-3
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR or MLRA): _____ Lat: 42.30165161 Long: -88.30559508 Datum: WGS 84
 Soil Map Unit Name: _____ NWI classification: _____

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
--	--

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

Depression adjacent to drain tile inlet with stunted soybeans.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
--	---

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align: right;">Total % Cover of:</td> <td style="width:50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>100</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>5.00</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>20</u> (A)	<u>100</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>20</u> (A)	<u>100</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Glycine max</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>UPL</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover				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.														
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														

80 percent bare ground. Stunted beans.

SOIL

Sampling Point: SP-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 23	10YR 2/1	100					Clay Loam	
23 - 30	10YR 2/1	97	10YR 5/8	2	C	M	Clay	
23 - 30			10YR 7/6	1	C	M	Clay	
30 - 40	2.5Y 5/2	78	7.5YR 4/4	2	C	M	Clay	
30 - 40			2.5Y 5/6	20	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-4
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR or MLRA): L 95 Lat: 42.30162361 Long: -88.30568022 Datum: WGS 84
 Soil Map Unit Name: 523A - Dunham silty clay loam, 0 to 2 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located in soybean field where the soybeans are no longer stunted.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-4

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Glycine max</u>	<u>90</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>90</u> = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				_____ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.)				
10 percent bare ground.				

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>90</u>	x 5 = <u>450</u>
Column Totals: <u>90</u> (A)	<u>450</u> (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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

SOIL

Sampling Point: SP-4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 10	10YR 2/2	100					Sandy Loam	
10 - 40	10YR 2/1	100					Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-5
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR or MLRA): L 95 Lat: 42.30218781 Long: -88.30259857 Datum: WGS 84
 Soil Map Unit Name: 103A - Houghton muck, 0 to 2 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located in unmanaged grassland with mix of upland and wetland plants within an NHD waterbody.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-5

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30 ft r</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>275</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.89</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>275</u> (B)	Prevalence Index = B/A = <u>2.89</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>10</u>	x 1 = <u>10</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>25</u>	x 3 = <u>75</u>																			
FACU species <u>35</u>	x 4 = <u>140</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>95</u> (A)	<u>275</u> (B)																			
Prevalence Index = B/A = <u>2.89</u>																				
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Panicum dichotomiflorum</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
2. <u>Ambrosia trifida</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
3. <u>Erigeron canadensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																	
4. <u>Setaria faberi</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																	
5. <u>Echinochloa crus-galli</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>																	
6. <u>Persicaria punctata</u>	<u>10</u>	<input type="checkbox"/>	<u>OBL</u>																	
7. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>95</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				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.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																

SOIL

Sampling Point: SP-5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 20	10YR 2/1	100					Silt Loam	
20 - 26	10YR 7/1	90	10YR 6/6	10	C	M	Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-6
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S16 T44N R8E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR or MLRA): L 95 Lat: 42.29923652 Long: -88.30192413 Datum: WGS 84
 Soil Map Unit Name: 103A - Houghton muck, 0 to 2 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located in sandbar willow floodplain adjacent to agricultural field edge and stream feature offsite.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-6

	Absolute % Cover	Dominant Species?	Indicator Status																						
Tree Stratum (Plot size: <u>30 ft r</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.00</u> (A/B)																					
1. _____	_____	_____	_____																						
2. _____	_____	_____	_____																						
3. _____	_____	_____	_____																						
4. _____	_____	_____	_____																						
5. _____	_____	_____	_____																						
6. _____	_____	_____	_____																						
7. _____	_____	_____	_____																						
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align:center;">Total % Cover of:</td> <td style="width:25%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>30</u></td> <td style="text-align:center;">x 2 = <u>60</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>25</u></td> <td style="text-align:center;">x 3 = <u>75</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>25</u></td> <td style="text-align:center;">x 4 = <u>100</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>80</u> (A)</td> <td style="text-align:center;"><u>235</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.93</u>		Total % Cover of:	Multiply by:	OBL species	<u>0</u>	x 1 = <u>0</u>	FACW species	<u>30</u>	x 2 = <u>60</u>	FAC species	<u>25</u>	x 3 = <u>75</u>	FACU species	<u>25</u>	x 4 = <u>100</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>80</u> (A)	<u>235</u> (B)
	Total % Cover of:	Multiply by:																							
OBL species	<u>0</u>	x 1 = <u>0</u>																							
FACW species	<u>30</u>	x 2 = <u>60</u>																							
FAC species	<u>25</u>	x 3 = <u>75</u>																							
FACU species	<u>25</u>	x 4 = <u>100</u>																							
UPL species	<u>0</u>	x 5 = <u>0</u>																							
Column Totals:	<u>80</u> (A)	<u>235</u> (B)																							
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																									
1. <u>Salix interior</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																						
2. <u>Morus rubra</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																						
3. _____	_____	_____	_____																						
4. _____	_____	_____	_____																						
5. _____	_____	_____	_____																						
6. _____	_____	_____	_____																						
7. _____	_____	_____	_____																						
_____ = Total Cover																									
Herb Stratum (Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																					
1. <u>Calystegia sepium</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																						
2. <u>Urtica dioica</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																						
3. _____	_____	_____	_____																						
4. _____	_____	_____	_____																						
5. _____	_____	_____	_____																						
6. _____	_____	_____	_____																						
7. _____	_____	_____	_____																						
8. _____	_____	_____	_____																						
9. _____	_____	_____	_____																						
10. _____	_____	_____	_____																						
11. _____	_____	_____	_____																						
12. _____	_____	_____	_____																						
_____ = Total Cover																									
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				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.																					
1. <u>Vitis riparia</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																						
2. _____	_____	_____	_____																						
3. _____	_____	_____	_____																						
4. _____	_____	_____	_____																						
_____ = Total Cover																									
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																					

SOIL

Sampling Point: SP-6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 10	10YR 2/1	100					Sandy Loam	
10 - 16	10YR 2/1	95	10YR 6/6	5	C	M	Clay Loam	
16 - 23	10YR 5/2	94	10YR 5/8	6	C	M	Sandy Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-7
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR or MLRA): L 95 Lat: 42.30069722 Long: -88.31302618 Datum: WGS 84
 Soil Map Unit Name: 523A - Dunham silty clay loam, 0 to 2 percent slopes NWI classification: PEM1C

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located in shoulder next to ephemeral stream, dominated by wetland plants within NWI.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-7

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: <u>30 ft r</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>220</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.31</u>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>220</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>95</u> (A)	<u>220</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. <u>Salix interior</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
2. <u>Populus deltoides</u>	<u>5</u>		<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Apocynum cannabinum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. <u>Carex stipata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>OBL</u>															
3. <u>Phragmites australis</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
4. <u>Cirsium arvense</u>	<u>5</u>		<u>FACU</u>															
5. <u>Eupatoriadelphus fistulosus</u>	<u>5</u>		<u>FACU</u>															
6. <u>Urtica dioica</u>	<u>5</u>		<u>FAC</u>															
7. <u>Verbena hastata</u>	<u>5</u>		<u>FACW</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
_____ = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 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 <input checked="" type="checkbox"/> No _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: SP-7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 18	10YR 2/1	90	10YR 3/4	10	C	M	Clay Loam	
18 - 24	10YR 3/2	90	10YR 6/6	10	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-08-21
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-8
 Investigator(s): Keegan Sansone, Cameo Neumann Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear Slope (%): 2
 Subregion (LRR or MLRA): L 95 Lat: 42.30064854 Long: -88.31302134 Datum: WGS 84
 Soil Map Unit Name: 523A - Dunham silty clay loam, 0 to 2 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located on edge of soybean agricultural field.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-8

<u>Tree Stratum</u> (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet:	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft r</u>)				Total % Cover of: _____ Multiply by: _____	
1. <u>Morus rubra</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	OBL species <u>0</u>	x 1 = <u>0</u>
2. <u>Catalpa speciosa</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	FACW species <u>0</u>	x 2 = <u>0</u>
3. _____	_____	_____	_____	FAC species <u>0</u>	x 3 = <u>0</u>
4. _____	_____	_____	_____	FACU species <u>50</u>	x 4 = <u>200</u>
5. _____	_____	_____	_____	UPL species <u>75</u>	x 5 = <u>375</u>
6. _____	_____	_____	_____	Column Totals: <u>125</u> (A)	<u>575</u> (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>4.60</u>	
<u>45</u> = Total Cover				Hydrophytic Vegetation Indicators:	
<u>Herb Stratum</u> (Plot size: <u>5 ft r</u>)				___ 1 - Rapid Test for Hydrophytic Vegetation	
1. <u>Glycine max</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	___ 2 - Dominance Test is >50%	
2. <u>Asclepias syriaca</u>	<u>15</u>	_____	<u>UPL</u>	___ 3 - Prevalence Index is ≤3.0 ¹	
3. <u>Setaria faberi</u>	<u>5</u>	_____	<u>FACU</u>	___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. _____	_____	_____	_____	Definitions of Vegetation Strata:	
7. _____	_____	_____	_____	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
8. _____	_____	_____	_____	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
9. _____	_____	_____	_____	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
10. _____	_____	_____	_____	Woody vines – All woody vines greater than 3.28 ft in height.	
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>80</u> = Total Cover					
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft r</u>)					
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: SP-8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 15	10YR 3/3	100					Sandy Clay Loam	
15 - 28	10YR 2/1	95	10YR 3/3	5	C	M	Sandy Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-09-24
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-9
 Investigator(s): Mason Kunkel and Jake Ackerman Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear Slope (%): 2
 Subregion (LRR or MLRA): A Lat: 42.30132017 Long: -88.31102248 Datum: WGS 84
 Soil Map Unit Name: 369B - Waupecan silt loam, 2 to 4 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located in agricultural hillslope with healthy beans.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-9

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Glycine max</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>80</u> = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				_____ = Total Cover
Remarks: (Include photo numbers here or on a separate sheet.)				

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>80</u>	x 5 = <u>400</u>
Column Totals: <u>80</u> (A)	<u>400</u> (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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

SOIL

Sampling Point: SP-9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 6	10YR 2/1	100					Clay Loam	
6 - 12	10YR 3/1	100					Clay Loam	
12 - 18	10YR 6/2	98	7.5YR 6/6	2	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-09-24
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-10
 Investigator(s): Mason Kunkel and Jake Ackerman Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR or MLRA): L 95 Lat: 42.30157142 Long: -88.31105124 Datum: WGS 84
 Soil Map Unit Name: 369B - Waupecan silt loam, 2 to 4 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located in ag depression with healthy beans.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-10

	Absolute % Cover	Dominant Species?	Indicator Status																													
Tree Stratum (Plot size: <u>30 ft r</u>)																																
1.																																
2.																																
3.																																
4.																																
5.																																
6.																																
7.																																
				_____ = Total Cover																												
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																																
1.																																
2.																																
3.																																
4.																																
5.																																
6.																																
7.																																
				_____ = Total Cover																												
Herb Stratum (Plot size: <u>5 ft r</u>)																																
1. <u>Glycine max</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>UPL</u>																													
2.																																
3.																																
4.																																
5.																																
6.																																
7.																																
8.																																
9.																																
10.																																
11.																																
12.																																
	<u>80</u>			_____ = Total Cover																												
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																																
1.																																
2.																																
3.																																
4.																																
				_____ = Total Cover																												
<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="text-align:center;">Total % Cover of:</td> <td style="width:50%;"></td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>0</u></td> <td>x 2 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>0</u></td> <td>x 3 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>0</u></td> <td>x 4 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>80</u></td> <td>x 5 =</td> <td style="text-align:center;"><u>400</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>80</u> (A)</td> <td></td> <td style="text-align:center;"><u>400</u> (B)</td> </tr> </table> <p style="text-align:right;">Prevalence Index = B/A = <u>5.00</u></p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> 2 - Dominance Test is >50%</p> <p><input type="checkbox"/> 3 - Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>						Total % Cover of:		Multiply by:	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>0</u>	x 2 =	<u>0</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>80</u>	x 5 =	<u>400</u>	Column Totals:	<u>80</u> (A)		<u>400</u> (B)
	Total % Cover of:		Multiply by:																													
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UPL species	<u>80</u>	x 5 =	<u>400</u>																													
Column Totals:	<u>80</u> (A)		<u>400</u> (B)																													
Remarks: (Include photo numbers here or on a separate sheet.)																																

SOIL

Sampling Point: SP-10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 6	10YR 2/1	100					Clay Loam	
6 - 12	10YR 3/1	100					Clay Loam	
12 - 18	10YR 6/2	98	7.5YR 6/6	2	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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: MH680 City/County: McHenry County Sampling Date: 2024-09-24
 Applicant/Owner: TPE IL MH680, LLC State: Illinois Sampling Point: SP-11
 Investigator(s): Mason Kunkel and Jake Ackerman Section, Township, Range: S09 T44N R8E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 3
 Subregion (LRR or MLRA): L 95 Lat: 42.30257215 Long: -88.31218305 Datum: WGS 84
 Soil Map Unit Name: 297B - Ringwood silt loam, 2 to 4 percent slopes NWI classification: _____

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
--	--

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

Sample point located on a slope in manicured grass field on non mowed spot.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP-11

	Absolute % Cover	Dominant Species?	Indicator Status																						
Tree Stratum (Plot size: <u>30 ft r</u>)																									
1.																									
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
	_____ = Total Cover																								
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																									
1.																									
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
	_____ = Total Cover																								
Herb Stratum (Plot size: <u>5 ft r</u>)																									
1. <u>Poa pratensis</u>	<u>90</u>	<input checked="" type="checkbox"/>		<u>FACU</u>																					
2. <u>Phalaris arundinacea</u>	<u>10</u>			<u>FACW</u>																					
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
9.																									
10.																									
11.																									
12.																									
	<u>100</u> = Total Cover																								
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																									
1.																									
2.																									
3.																									
4.																									
	_____ = Total Cover																								
<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align:center;">Total % Cover of:</td> <td style="width:25%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>10</u></td> <td style="text-align:center;">x 2 = <u>20</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 3 = <u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>90</u></td> <td style="text-align:center;">x 4 = <u>360</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>100</u> (A)</td> <td style="text-align:center;"><u>380</u> (B)</td> </tr> </table> <p style="text-align:right;">Prevalence Index = B/A = <u>3.80</u></p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> 2 - Dominance Test is >50%</p> <p><input type="checkbox"/> 3 - Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small></p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>						Total % Cover of:	Multiply by:	OBL species	<u>0</u>	x 1 = <u>0</u>	FACW species	<u>10</u>	x 2 = <u>20</u>	FAC species	<u>0</u>	x 3 = <u>0</u>	FACU species	<u>90</u>	x 4 = <u>360</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>100</u> (A)	<u>380</u> (B)
	Total % Cover of:	Multiply by:																							
OBL species	<u>0</u>	x 1 = <u>0</u>																							
FACW species	<u>10</u>	x 2 = <u>20</u>																							
FAC species	<u>0</u>	x 3 = <u>0</u>																							
FACU species	<u>90</u>	x 4 = <u>360</u>																							
UPL species	<u>0</u>	x 5 = <u>0</u>																							
Column Totals:	<u>100</u> (A)	<u>380</u> (B)																							
Remarks: (Include photo numbers here or on a separate sheet.)																									

SOIL

Sampling Point: SP-11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 12	10YR 2/1	100					Clay Loam	
12 - 24	10GY 6/1	100					Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy 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 Soils³:

- 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)

³Indicators 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

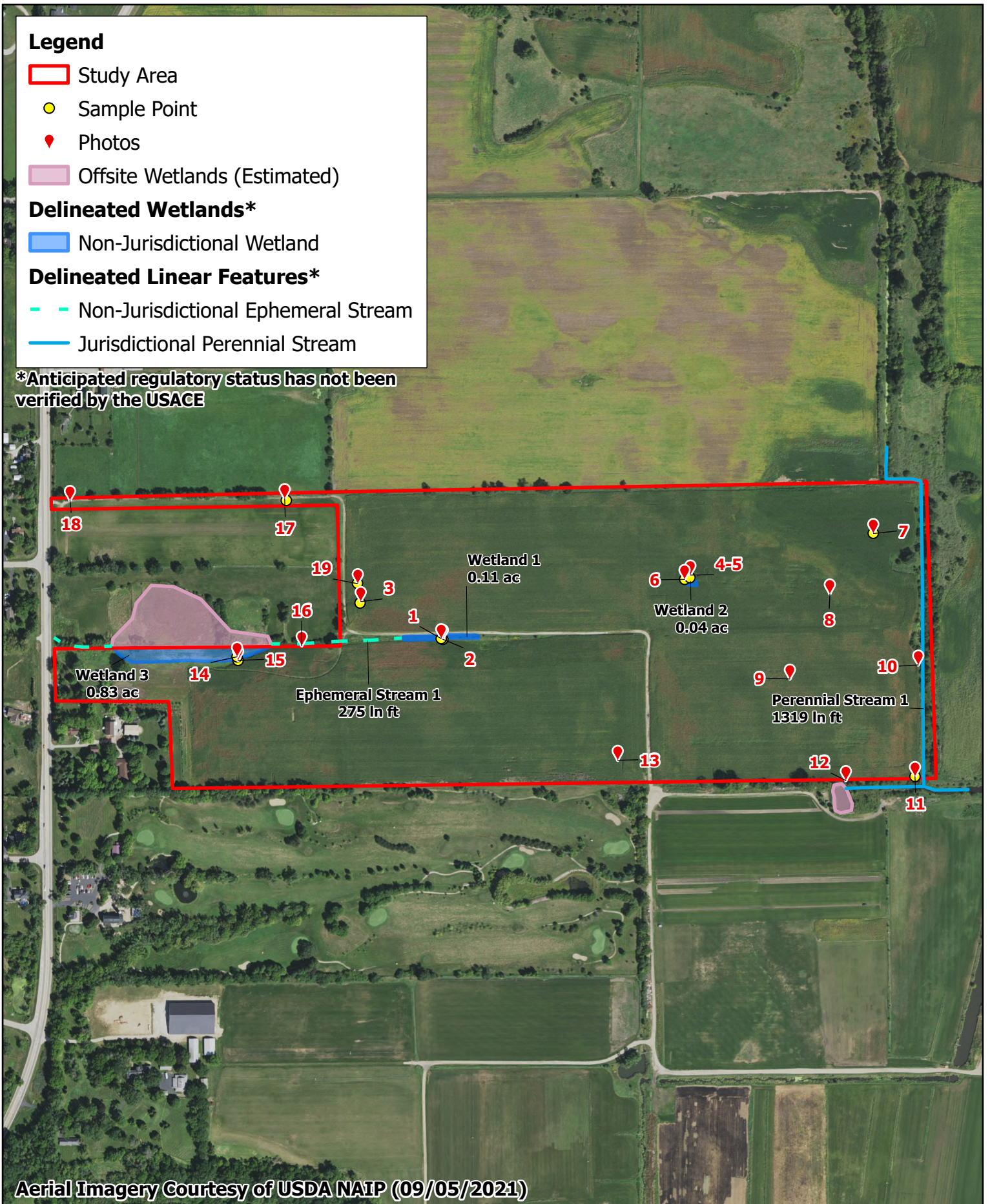
Remarks:

Appendix E: Photos

Legend

- Study Area
- Sample Point
- 📍 Photos
- Offsite Wetlands (Estimated)
- Delineated Wetlands***
- Non-Jurisdictional Wetland
- Delineated Linear Features***
- Non-Jurisdictional Ephemeral Stream
- Jurisdictional Perennial Stream

***Anticipated regulatory status has not been verified by the USACE**



Aerial Imagery Courtesy of USDA NAIP (09/05/2021)





Photo 1: Wetland area at SP-1, within wetland 1, facing east.



Photo 2: Upland area at SP-2, facing west.



Photo 3: Upland area at SP-9 within historic AOI 2, facing south.



Photo 4: Wetland area at SP-3 within historic AOI 1 and wetland 2, facing south.



Photo 5: Drain tile at SP-3 within historic AOI 1.



Photo 6: Upland area at SP-4, facing north.



Photo 7: Upland area at SP-5, facing west.



Photo 8: Upland area within historic AOI 5, facing south.



Photo 9: Upland area within historic AOI 6, facing west.



Photo 10: General site photo of perennial stream along eastern boundary of study area.



Photo 11: Upland area at SP-6, facing south.



Photo 12: Offsite stream and wetland, facing south.



Photo 13: Upland area within historic AOI 3, facing north.



Photo 14: Wetland area at SP-7, within wetland 3, facing west



Photo 15: Upland area at SP-8, facing north.



Photo 16: General site photo of ephemeral stream in the western central portion of the study area and boundary.



Photo 17: Upland area at SP-11 within historic AOI 7, facing south.



Photo 18: General site photo in northwestern easement line, facing east.

Appendix F: Floristic Quality Assessment

SITE: MH 680
LOCALE: Nunda TWP,
 McHenry County
BY: Kimley-Horn
NOTES: Wetland 1

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.17	SPECIES RICHNESS (ALL)	9
MEAN C (ALL SPECIES)	2.11	SPECIES RICHNESS (NATIVE)	6
MEAN C (NATIVE TREES)	n/a	% NON-NATIVE WET INDICATOR (ALL)	0.33
MEAN C (NATIVE SHRUBS)	5.50	WET INDICATOR (NATIVE)	-0.67
MEAN C (NATIVE HERBACEOUS)	2.00	% HYDROPHYTE (MIDWEST)	0.78
FQAI (NATIVE SPECIES)	7.76	% NATIVE PERENNIAL	0.67
FQAI (ALL SPECIES)	6.33	% NATIVE ANNUAL	0.00
ADJUSTED FQAI	25.86	% ANNUAL	0.00
% C VALUE 0	0.44	% PERENNIAL	1.00
% C VALUE 1-3	0.33		
% C VALUE 4-6	0.11		
% C VALUE 7-10	0.11		

SPECIES ACRONYM	SPECIES NAME (NWPL/MOHNENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
LEEORY	Leersia oryzoides	oryzoides	Rice Cut Grass		3 OBL	OBL		-2 Grass	Perennial	Native
PHAARU	Phalaris arundinacea	ARUNDINACEA A	Reed Canary Grass		0 FACW	FACW		-1 Grass	Perennial	Adventive
PHYLON	Physalis longifolia	Physalis subglabrata	Cherry		0 UPL	UPL		2 Forb	Perennial	Native
SALBEB	Salix bebbiana	bebbiana	Gray Willow		9 FACW	FACW		-1 Shrub	Perennial	Native
SALINT	Salix interior	Salix interior	Sandbar Willow		2 FACW	FACW		-1 Shrub	Perennial	Native
TAROFF	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion		0 FACU	FACU		1 Forb	Perennial	Adventive
TYPGLA	Typha X glauca	TYPHA X GLAUCA	Hybrid Cat-Tail		0 OBL	OBL		-2 Forb	Perennial	Adventive
URTDIO	Urtica dioica ssp. gracilis	Urtica procera; Urtica gracilis	Tall Nettle		1 FACW	FAC		-1 Forb	Perennial	Native
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy		4 FACW	FACW		-1 Forb	Perennial	Native

SITE: MH 680
LOCALE: Nunda tWP,
 McHenry County
BY: Kimley-Horn
NOTES: Wetland 2

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	1.00	SPECIES RICHNESS (ALL)	3
MEAN C (ALL SPECIES)	0.33	SPECIES RICHNESS (NATIVE)	1
MEAN C (NATIVE TREES) n/a		% NON-NATIVE WET INDICATOR (ALL)	0.67
MEAN C (NATIVE SHRUBS) n/a			0.67
MEAN C (NATIVE HERBACEOUS)	1.00	WET INDICATOR (NATIVE)	-1.00
FQAI (NATIVE SPECIES)	1.00	% HYDROPHYTE (MIDWEST)	0.33
FQAI (ALL SPECIES)	0.58	% NATIVE PERENNIAL	0.33
ADJUSTED FQAI	5.77	% NATIVE ANNUAL	0.00
% C VALUE 0	0.67	% ANNUAL	0.67
% C VALUE 1-3	0.33	% PERENNIAL	0.33
% C VALUE 4-6	0.00		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
CYPSTR	Cyperus strigosus	strigosus	Straw-Color Flat Sedge		1 FACW	FACW	-1	Sedge	Perennial	Native
GLYMAX	Glycine max	GLYCINE MAX	Soybean		0 UPL	UPL	2	Forb	Annual	Adventive
SETFAB	Setaria faberi	SETARIA FABERI	Japanese Bristle Grass		0 FACU	FACU	1	Grass	Annual	Adventive

SITE: MH 680
LOCALE: Nunda TWP,
 McHenry County
BY: Kimley-Horn
NOTES: Wetland 3

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.90	SPECIES RICHNESS (ALL)	16
MEAN C (ALL SPECIES)	2.44	SPECIES RICHNESS (NATIVE)	10
MEAN C (NATIVE TREES)	5.00	% NON-NATIVE WET INDICATOR (ALL)	0.38
MEAN C (NATIVE SHRUBS)	2.00		-0.56
MEAN C (NATIVE HERBACEOUS)	3.86	WET INDICATOR (NATIVE)	-0.90
FQAI (NATIVE SPECIES)	12.33	% HYDROPHYTE (MIDWEST)	0.81
FQAI (ALL SPECIES)	9.75	% NATIVE PERENNIAL	0.63
ADJUSTED FQAI	30.83	% NATIVE ANNUAL	0.00
% C VALUE 0	0.44	% ANNUAL	0.00
% C VALUE 1-3	0.25	% PERENNIAL	1.00
% C VALUE 4-6	0.19		
% C VALUE 7-10	0.13		

SPECIES ACRONYM	SPECIES NAME (NWPL/MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp		2 FAC	FAC		0 Forb	Perennial	Native
CXSTIP	Carex stipata	Carex stipata	Stalk-Grain Sedge		4 OBL	OBL		-2 Sedge	Perennial	Native
CIRARV	Cirsium arvense	ARVENSE	Canadian Thistle		0 FACU	FACU		1 Forb	Perennial	Adventive
EUPFIS	Eutrochium fistulosum	Eupatorium fistulosum	Trumpetweed		9 OBL	FACW		-2 Forb	Perennial	Native
LEEORY	Leersia oryzoides	oryzoides	Rice Cut Grass		3 OBL	OBL		-2 Grass	Perennial	Native
MORRUB	Morus rubra	Morus rubra	Red Mulberry		10 FACU	FACU		1 Tree	Perennial	Native
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass		0 FACW	FACW		-1 Grass	Perennial	Adventive
PHRAUSV	Phragmites australis cult. variegatus	PHRAGMITES AUSTRALIS CULT. VARIEGATUS	Striped Common Reed		0 UPL	UPL		2 Grass	Perennial	Adventive
POPDEL	Populus deltoides	deltoides	Eastern Cottonwood		0 FAC	FAC		0 Tree	Perennial	Native
RHACAT	Rhamnus cathartica	CATHARTICA	European Buckthorn		0 FAC	FAC		0 Shrub	Perennial	Adventive
SALINT	Salix interior	Salix interior	Sandbar Willow		2 FACW	FACW		-1 Shrub	Perennial	Native
SOLDUL	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade		0 FAC	FAC		0 Vine	Perennial	Adventive
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod		4 FACW	FACW		-1 Forb	Perennial	Native
TYPGLA	Typha X glauca	TYPHA X GLAUCA	Hybrid Cat-Tail		0 OBL	OBL		-2 Forb	Perennial	Adventive
URTDIO	Urtica dioica ssp. gracilis	Urtica procera; Urtica gracilis	Tall Nettle		1 FACW	FAC		-1 Forb	Perennial	Native
VERHAS	Verbena hastata	Verbena hastata	Simpler's-Joy		4 FACW	FACW		-1 Forb	Perennial	Native