Heartland
ECOLOGICAL GROUP INC

Wetland Delineation Report

46.47-Acre Parcel

Town of Rutland, Kane County, Illinois

August 20, 2024

Project Number: 20241317

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

46.47-Acre Parcel

Town of Rutland, Kane County, Illinois

August 20, 2024

Prepared for:

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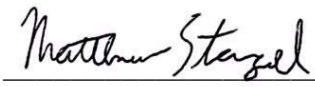

Reviewed by: Matthew Stangel,
Environmental Scientist

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Table of Contents

1.0 Introduction

Heartland Ecological Group, Inc. ("Heartland") completed a wetland determination on the 46.47 Acre Parcel on August 6, 2024 at the request of Surya Powered LLC. Fieldwork was completed by Eric C. Parker, SPWS, Kane County QWRS #W-057 (Appendix E, Qualifications). The 46.47-acre site (the "Study Area") is southeast of the intersection of Illinois Route 72 (Higgins Road) and Kane County Route 21 (Big Timber Road), in the southeast ¼ of section 22, T42N, R7E, Town of Rutland, Kane County, IL (Figure 1, Appendix A). The purpose of the wetland delineation was to determine the location and extent of wetlands and jurisdictional waterways within the Study Area.

No (0) wetlands were determined to be present within the Study Area (Figure 6, Appendix A). No (0) waterways or water bodies were observed within or adjacent to the Study Area.

Wetlands, waterways, and water bodies discussed in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the Illinois Environmental Protection Agency (IEPA), and local or county zoning authorities. Heartland recommends this report be submitted to local authorities, the IEPA, and USACE for final jurisdictional review and concurrence.

2.0 Methods

2.1 Wetlands

Wetlands were determined and delineated using the criteria and methods described in the USACE Wetlands Delineation Manual, T.R. Y-87-1 ("1987 Corps Manual") and the applicable *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*.

Determinations and delineations utilized available resources including the U.S. Geological Survey's (USGS) *WI 7.5 Minute Series (Topographic) Map* (Figure 2, Appendix A), the Natural Resource Conservation Service's (NRCS) Soil Survey Geographic Database (SSURGO), U.S. Department of Agriculture's (USDA) *Web Soil Survey* (Figure 3, Appendix A), and the U.S. Fish and Wildlife Service's (USFWS) *National Wetland Inventory* mapping (Figure 4, Appendix A), the Illinois Department of Natural Resources' *LiDAR Service Layer* (Figure 6, Appendix A), and aerial imagery available through the USDA Farm Service Agency's (FSA) National Agriculture Imagery Program (NAIP) and Google Earth™. The USGS *National Hydrography Dataset* is included on Figures 2 and 4, Appendix A.

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

Atypical conditions were encountered within the Study Area due to the presence of an agricultural field including row-cropping in areas with soils that may be hydric based on the *Web Soil Survey*. Therefore, procedures for managed plant communities in the *Problematic hydrophytic vegetation* section described in Chapter 5 of the Regional Supplement were used.

Available imagery was reviewed for evidence of crop stress, saturation, or inundation signatures using procedures described in the *Guidance for Offsite Hydrology/Wetland Determinations* (USACE and Minnesota Board of Water and Soil Resources, July 2016 – "July 2016 Guidance") and the ECS-Wetland Mapping Conventions per Illinois Bulletin No. IL 190-8-4, December 1997 (1997 Illinois Guidance). However, FSA slides were not utilized.

Sample point placements for the wetland determinations were partially determined based on such signatures.

An off-site aerial imagery analysis (Off-Site Analysis) was completed to document the presence or absence of wetland signatures and assist in the wetland determination. A wetland signature is evidence, recorded by aerial imagery, of ponding, flooding, or impacts of saturation for sufficient duration to meet wetland hydrology and possibly wetland vegetation criteria. Wetland signatures often vary based on the type and seasonal date of the aerial imagery. For example, there are seven (7) standardized signature types in actively farmed settings described in the July 2016 Guidance and in the Illinois Guidance. To assist in interpretations of wetland signatures, a WETS analysis was used to compare antecedent precipitation in the three (3) months leading up to each aerial image to the long-term (30-year) precipitation averages and standard deviation to determine if antecedent precipitation conditions for each image was normal, wet, or dry. Areas within agricultural fields are typically determined to be wetland if hydric soils and wetland hydrology indicators are present and aerial images taken in the five (5) (or more) most recent normal antecedent precipitation images show at least one (1) of the wetland signatures per the July 2016 Guidance and Illinois Guidance. Although the Off-Site Analysis concentrates on imagery taken under normal antecedent precipitation conditions, the images determined to be taken under wet and dry antecedent precipitation conditions were also analyzed and considered. Determinations and delineation of wetlands in agricultural areas are typically based on an outline of the largest wetland signature on an image taken under "normal" antecedent conditions and based on the consistency of the signatures (1997 Illinois Guidance).

If wetland areas are present in the Study Area a Floristic Quality Assessment (FQA) was completed by listing species in each wetland area identified within the Study Area and applying the assessment technique developed by Swink and Wilhelm (1994) for a fast evaluation of plant communities. This method calculates a mean Coefficient of Conservatism value (C) and a Floristic Quality Index value (FQI) for each wetland area. A state or region assigns each native species a C value ranging between 0 to 10 that represents an estimated probability that a plant species is likely to occur in a landscape relatively unaltered from what is thought to be a pre-settlement condition. A C-value of 0 is applied to a species that

demonstrates no fidelity to any remnant natural community, whereas a C-value of 10 is applied to plants that are nearly always restricted to pre-settlement remnant communities. Values lower than 4 generally represent weedy species and values closer to 10 represent more "conservative", rare, or disturbance intolerant species (Swink and Wilhelm, 1994). FQI values were calculated using the following formula:

FQI = Mean C ($\sqrt{N}$)

C= Coefficient of Conservatism

N=species richness (Identifiable Native and Non-native)

The FQI has traditionally been calculated using C values and species richness of only native species. However, more recently, scientists have been including the non-native species in the calculations, giving all non-native species a C value of "0". This methodology better reflects the actual integrity of a site, particularly in highly disturbed conditions dominated by non-native taxa. Disregarding the non-native species can often give sites falsely elevated mean C and FQI values that do not reflect the presence or abundance of these less-desirable species, which can influence the overall floristic quality of an area.

Recent weather conditions influence the visibility or presence of certain wetland hydrology indicators. An assessment of recent precipitation patterns helps to determine if climatic/hydrologic conditions were typical when the field investigation was completed. Therefore, a review of antecedent precipitation in the 90 days leading up to the field investigation was completed. Using an Antecedent Precipitation Tool (APT) analysis developed by the USACE (Deters & Gutenson 2021), the amount of precipitation over these 90 days was compared to averages and standard deviation thresholds observed over the past 30 years to generally represent if conditions encountered during the investigation were normal, wet, or dry. Recent precipitation events in the weeks prior to the investigation were also considered while interpreting wetland hydrology indicators. Finally, the Palmer Drought Severity Index was checked for long-term drought or moist conditions (NOAA, 2018).

The uppermost wetland boundary (if present) and wetland determination sample points were identified and located with a Global Navigation Satellite System (GNSS) receiver capable of sub-meter accuracy. Due to active agricultural areas, wetland flagging was not utilized to mark the wetland boundary (if present) and sample point locations were only

recorded with a GNSS receiver. The GNSS data was then used to map the wetlands (if present) and sample point locations using ESRI ArcGIS Pro™ software.

Waterways and waterbodies within the Study Area were identified and mapped in this investigation if they may be under federal, state, or local zoning authority or were previously identified on Figures 2 and 4. Culverts associated with ditches and waterways in the Study Area were also identified and located with GPS if they were adjacent to or associated with delineated wetlands.

3.0 Results and Discussion

3.1 Desktop Review

Climatic Conditions

According to the APT analysis using the previous 90 days of precipitation data, conditions encountered at the time of the October 27, 2023, fieldwork were expected to be in the normal range for the time of year (Appendix B). The Palmer Drought Severity Index was checked as part of the APT analysis, and the long-term conditions at the time of the fieldwork was in the mild wetness range. Fieldwork was completed within the dry season based on long-term regional hydrology data utilized in the WebWIMP Climatic Water Balance and computed as part of the APT analysis.

General Topography and Land Use

The topography within the Study Area was rolling with various hills, swales, and slopes. A topographic high of approximately 910 feet above mean sea level (msl) is found on the western edge of the Study Area. Topographic lows of approximately 890 feet above msl may be found in the field near the eastern edge of the Study Area (Figures 2 and 6, Appendix A). Land use within the Study Area consisted of agricultural row crops. Surrounding areas were composed mostly of other agricultural properties, residential properties, highways-roads, and vacant land with a mapped waterway on the east. General drainage is to the east where an unnamed tributary to Tyler Creek is depicted on Figures 2 and 4 (Appendix A).

Soil Mapping

Soils mapped by the NRCS Soil Survey within the Study Area, and their hydric status are summarized in Table 1. Wetland determinations during the field investigation are located primarily within areas mapped as poorly drained and hydric (Figure 3, Appendix A).

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

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
67A: Harpster silty clay loam, 0-2% slopes	Harpster-Drained	88-100	Depressions on till plains, lake plains, and outwash plains	Yes
	Drummer-Drained	0-9	Swales on till plains and outwash plains	Yes
	Elburn	0-5	Till plains, outwash plains	No
134C2: Camden silt loam, 5-10% slopes, eroded	Camden-Eroded	90-98	Stream terraces	No
	Drummer-Drained	1-4	Swales and stream terraces on till plains and outwash plains	Yes
	Millbrook	0-2	Stream terraces	No
	Senachwine-Eroded	0-2	Ground and end moraines	No
	Huntsville-Occasionally flooded	0-2	Flood plains	No
149A: Brenton silt loam, 0-2% slopes	Brenton	91-100	Stream terraces, outwash plains	No
	Drummer-Drained	0-9	Swales on till plains and outwash plains	Yes
152A: Drummer silty clay loam, 0-2% slopes	Drummer-Drained	90-100	Swales and stream terraces on till plains and outwash plains	Yes
	Harpster-Drained	0-9	Depressions on outwash plains	Yes
	Peotone-Drained	0-9	Depressions on outwash plains	Yes
662A: Barony silt loam, 0-2% slopes	Barony	92	Stream terraces, outwash plains	No

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
	Drummer	8	Outwash plains, ground moraines	Yes
668A: Somonauk silt loam, 0-2% slopes	Somonauk	92	Stream terraces, outwash plains	No
	Drummer	8	Outwash plains, ground moraines	Yes
668B: Somonauk silt loam, 2-5% slopes	Somonauk	92	Stream terraces, outwash plains	No
	Drummer		Outwash plains, ground moraines	Yes

Wetland Mapping

The National Wetlands Inventory (NWI) mapping (Figure 4, Appendix A) does not depict any wetlands, waterways, or water bodies within the Study Area. A riverine wetland (R4SBC) is mapped east of the Study area. This wetland is associated with an unnamed tributary to Tyler Creek that is depicted on Figures 2 and 4 (Appendix A).

Off-Site Analysis

An agricultural field within the Study Area has mapped hydric or potentially hydric soils and was the focus of the Off-Site Analysis (Appendix F). From the aerial imagery, in farmed depressional and swale areas, the secondary wetland hydrology indicators "Saturation Visible on Aerial Imagery" (C9) and "Stunted or Stressed Plants" (D1) were noted in imagery up until 2017, but were not noted in recent years.

A total of 30 aerial images were selected and reviewed based on availability and quality of the imagery. Of these images, 21 were taken under normal antecedent precipitation conditions. Signatures were noted in four (4) locations within landscape positions described by the NRCS to support hydric soil components and were the focus of the Off-Site Analysis. None (0) of the seven (7) described wetland signatures per the July 2016 Guidance were consistently noted in these areas on imagery taken under normal antecedent precipitation. In imagery taken under both wet and dry antecedent precipitation conditions, such wetland signatures were also inconsistently noted.

Based on the Off-Site Analysis, no (0) of the areas were potentially wetland prior to the fieldwork with consistent signatures. The final wetland determinations were completed in the field based on the extent of hydric soils (if present) and the presence of wetland hydrology indicators. Drain tile signatures are visible in 2015 and 2017 images included in the Off-Site Analysis. There appeared to be a pipeline repair in approximately 2015.

3.2 Field Review

No (0) wetlands were identified and delineated within the Study Area. Wetland determination data sheets (Appendix C) were completed at six (6) sample points that were representative of conditions where potential wetlands may be present based on the desktop review and field reconnaissance. Appendix D provides photographs, typically at the sample point locations. The sample point locations are shown on Figure 6 (Appendix A).

3.3 Other Considerations

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

4.0 Conclusion

Heartland completed a wetland determination and delineation on the 46.47 Acre Parcel on August 6, 2024 at the request of Surya Powered LLC. Fieldwork was completed by Eric C. Parker, SPWS (Appendix E, Qualifications). The 46.47-acre Study Area is southeast of the intersection of Illinois Route 72 (Higgins Road) and Kane County Route 21 (Big Timber Road), in the southeast ¼ of section 22, T42N, R7E, Town of Rutland, Kane County, IL (Figure 1, Appendix A).

No (0) wetlands were determined to be present within the Study Area (Figure 5b, Appendix A). No (0) waterways or water bodies were observed within or adjacent to the Study Area.

Wetlands, waterways, and water bodies discussed in this report may be subject to federal regulation under the jurisdiction of the USACE, state regulation under the jurisdiction of the IEPA, Kane County, and possible other local zoning authorities. Heartland recommends this report be submitted to the USACE and Kane County for final jurisdictional review and concurrence.

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

Experienced and qualified professionals completed the wetland determination and delineation using standard practices and professional judgment. Wetland boundaries may be affected by conditions present within the Study Area at the time of the fieldwork. All final decisions on wetlands and their boundaries are made by the USACE. Wetland determination and boundary reviews by regulatory agencies may result in modifications to the findings presented to the Client. These modifications may result from varying conditions between the time the wetland delineation was completed and the time of the review. Factors that influence the findings may include but are not limited to precipitation patterns, drainage modifications, changes or modification to vegetation, and the time of year.

5.0 References

Deters, J. & Gutenson, J. (2021). Antecedent Precipitation Tool (APT) [Electronic Source: python source code]. See: GitHub - jDeters-USACE/Antecedent-Precipitation-Tool:

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

Google Earth™ Pro (2024). *Open Source Aerial Imagery.* Version 7.3.6.9796 (64-bit). Server: Kh.google.com.

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

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

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

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

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

USACE. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0*). (2010). ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

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

United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). (2010). *Field Indicators of Hydric Soils in the United States*, Version 8.1. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.

USDA, Farm Service Agency (FSA). (2005-2021) [Kane County, Illinois aerial photographs]. National Agriculture Imagery Program (NAIP). Salt Lake City, UT: Aerial Photography Field Office.

USDA, NRCS. *ECS – Wetland Mapping Conventions*, NRCS Illinois 1998. Illinois Bulletin No. IL 190-8-4. Addition to Section 514 of the Food Security Act Manual. December 16, 1997.

United States Department of the Interior (USDI) Fish & Wildlife Service – Ecological Services. (2018). *National Wetland Inventory*. See: https://www.fws.gov/wetlands/.

USDI, U.S. Geological Survey (USGS). *Illinois 7.5 Minute Series (Topographic) Maps.* 1:24,000. Reston, VA.

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

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

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

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

Appendix A | Figures

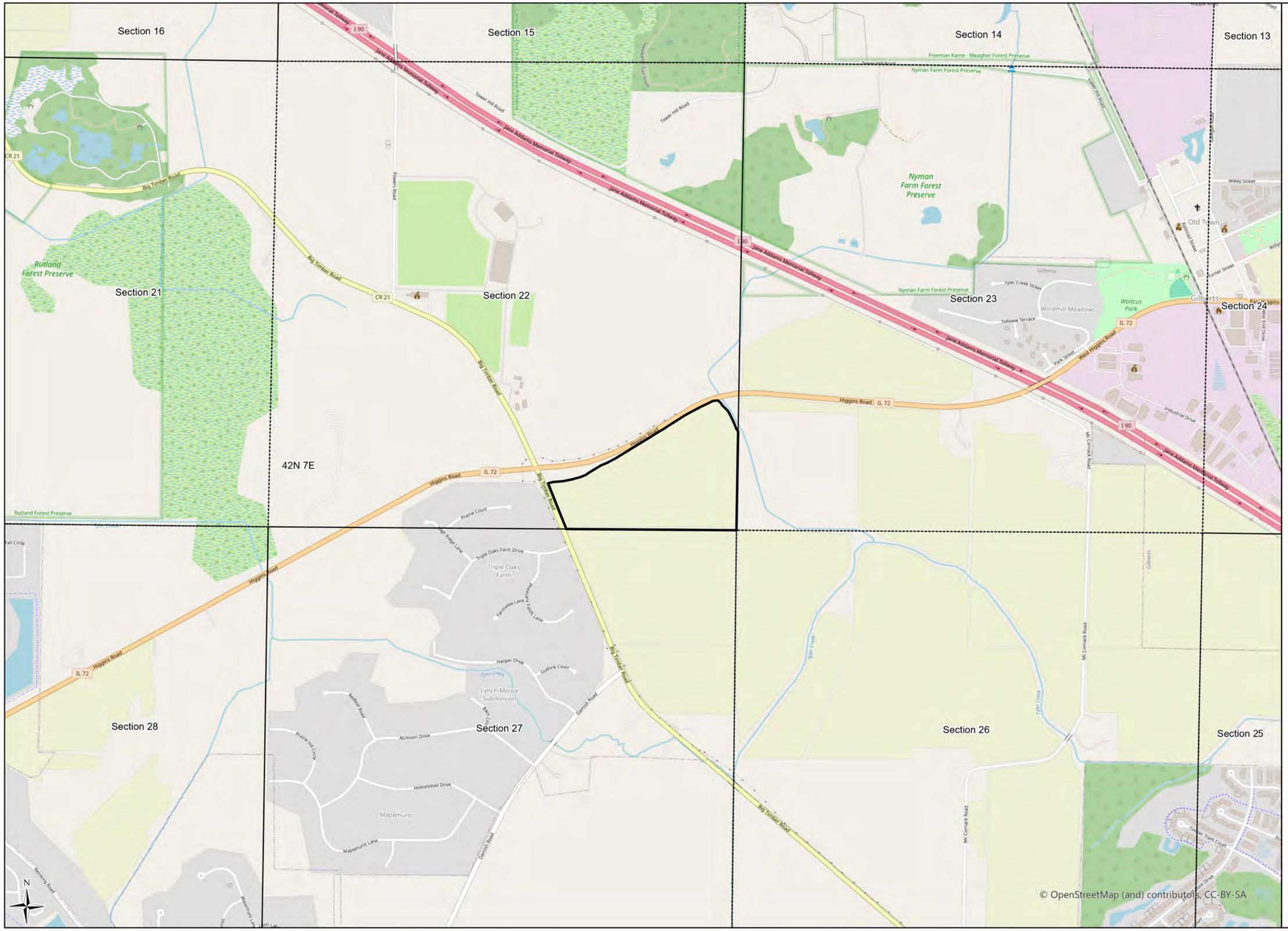

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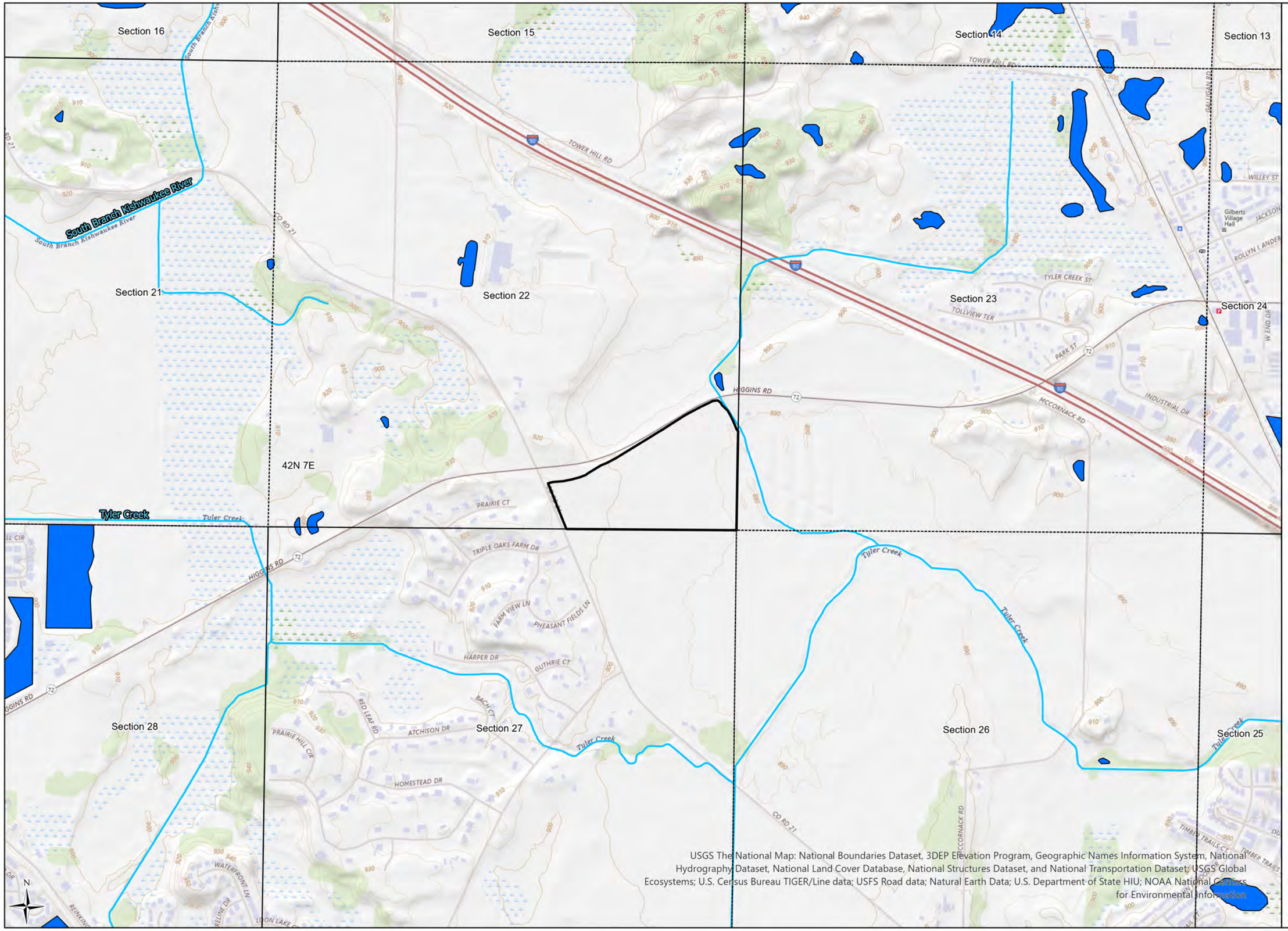
Figure 1. Project Location

46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

OpenStreetMap
ESRI
LRR: NCNE

Figure Created: 7/29/2024



Study Area (47.54 ac)
Township
Section
NHD Waterway
NHD Waterbody

0 500 1,000 Ft

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information

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Figure 2. USGS Topography
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

USGSTopo
USGS
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

Hydric Soils

Hydric

Non-Hydric

0 100 200 Ft

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Figure 3. NRCS Hydric Soils

46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2022 NAIP
NRCS LRR: NCNE

Figure Created: 7/30/2024

Study Area (47.54 ac)
NWI Wetlands
NHD Waterway
NHD Waterbody

0 100 200 Ft

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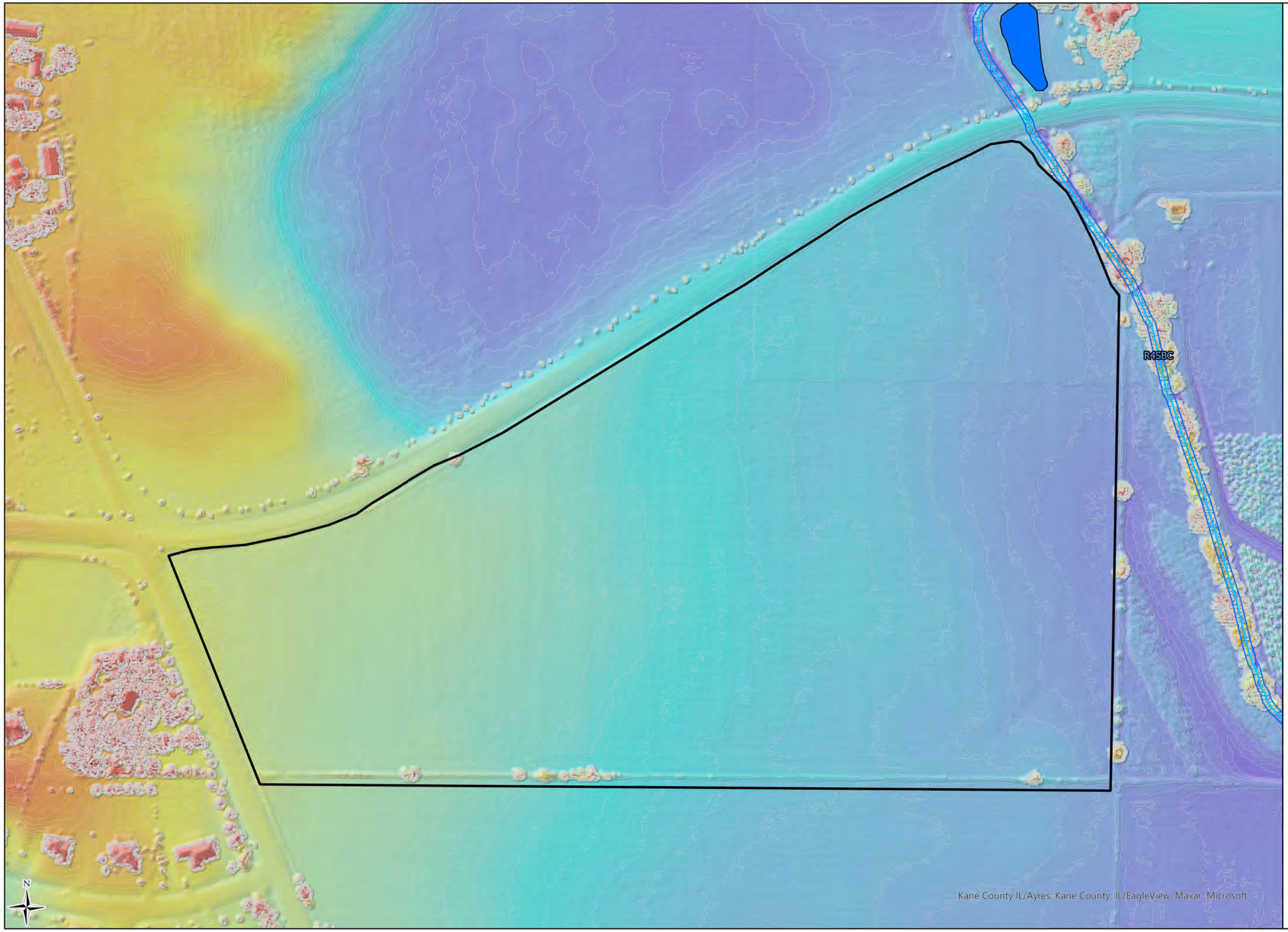
Figure 4. National Wetland Inventory
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2022 NAIP
USFWS, USGS
LRR: NCNE

Figure Created: 7/30/2024



Study Area (47.54 ac)

0 100 200 Ft

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Figure 5. Color-Stretch Digital Elevation Model
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

DNR Lidar Service
Kane Co., IDNR
LRR: NCNE

Figure Created: 7/30/2024

Study Area (47.54 ac)

Field Determined Wetlands (None Identified)

Culverts

Sample Points

Upland

0 100 200 Ft

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Figure 6. Field Determined Wetlands

46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

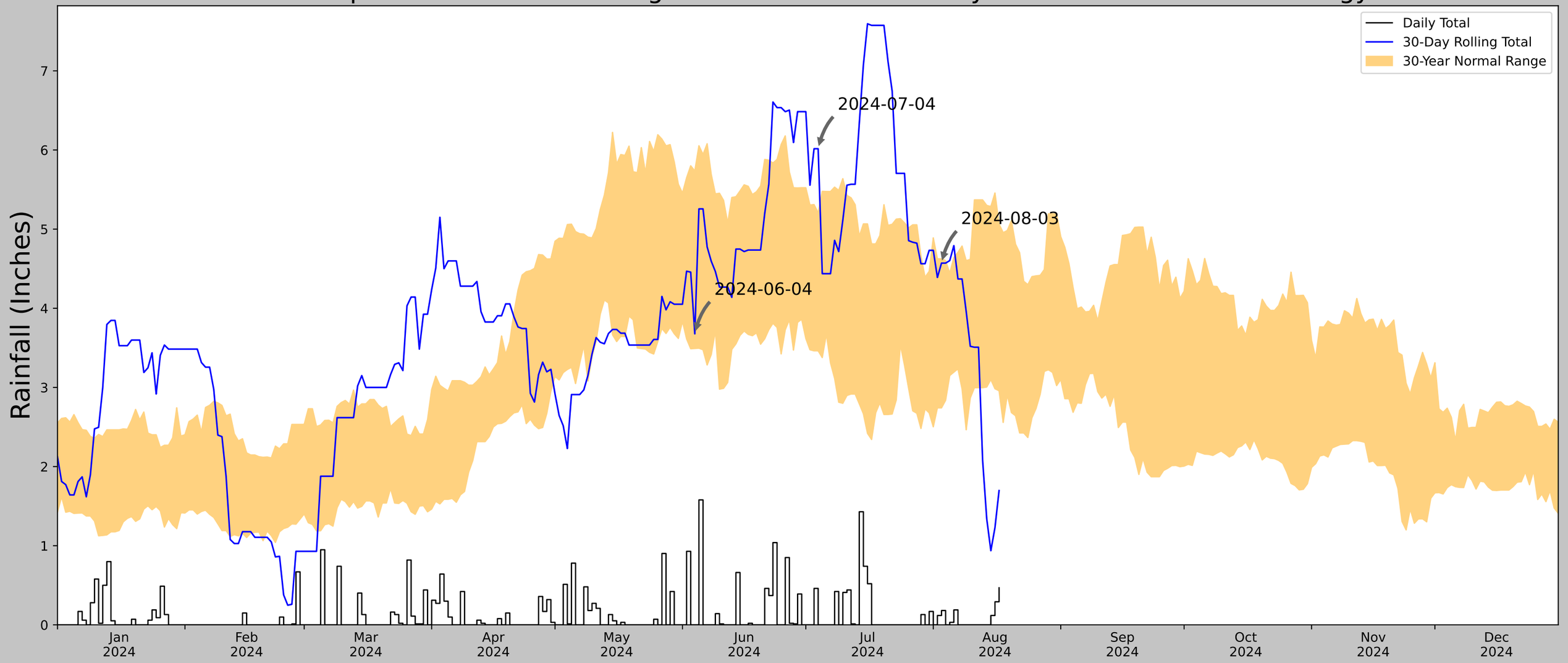
2022 NAIP
Kane Co, HEG

LRR: NCNE

Figure Created: 8/14/2024

Appendix B | APT Analysis

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



Coordinates	42.098973, -88.394869
Observation Date	2024-08-03
Elevation (ft)	891.175
Drought Index (PDSI)	Mild wetness (2024-07)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-03	2.741339	4.624803	4.570866	Normal	2	3	6
2024-07-04	3.462205	5.205906	6.015748	Wet	3	2	6
2024-06-04	3.492126	5.73504	3.677165	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ELGIN WATER	42.0628, -88.2861	745.079	6.112	146.096	3.643	11206	85
ELGIN 1.1 NNE	42.0557, -88.2829	786.089	0.517	41.01	0.254	0	5
ELGIN 1.9 NE	42.0606, -88.264	807.087	1.144	62.008	0.586	5	0
ELGIN 0.9 WSW	42.0366, -88.3056	830.053	2.068	84.974	1.106	14	0
ELGIN 2.3 WNW	42.0531, -88.3294	824.147	2.32	79.068	1.227	14	0
ELGIN 1.0 S	42.0256, -88.2885	777.887	2.573	32.808	1.242	17	0
STREAMWOOD	42.0256, -88.1783	818.898	6.099	73.819	3.195	76	0
BARRINGTON 3SW	42.1153, -88.1639	882.874	7.24	137.795	4.256	2	0
ELK GROVE VILLAGE	42.0033, -88.0069	700.131	14.907	44.948	7.378	4	0
MCHENRY STRATTON LOCK/DAM	42.3097, -88.2533	735.892	17.142	9.187	7.871	14	0

Appendix C | Wetland Determination Data Sheets

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 20241317 46.47 Ac Kane Co City/County: Kane County Sampling Date: 2024-08-06

Applicant/Owner: Surya Powered State: Illinois Sampling Point: P1

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 22 T042N R007E

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

Slope (%): 0-2 Lat: 42.098973 Long: -88.394869 Datum: WGS84

Soil Map Unit Name: Drummer silty clay loam, 0 to 2 percent slopes NWI classification: None Depicted

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

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

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

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

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

Remarks:
Active ag field planted in corn. Not NC. APT analysis indicates climatic conditions are in the normal range.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *VERONICA ARVENSIS*	1	N	FACU
2. *SONCHUS OLERACEUS*	1	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	0.00	x 3 =	0.00
FACU species	2.00	x 4 =	8.00
UPL species	0.00	x 5 =	0.00
Column Totals:	2.00 (A)		8.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)
Active ag field planted in corn. Sparse weeds. Corn crop healthy with 80% cover and approximately 7-8 ft height.

SOIL

Sampling Point: P1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/1	100					SIL	No redox
14-19	2.5Y 4/2	95	2.5Y 5/4	5	C	M	SICL	
19-24	2.5Y 5/2	85	2.5Y 5/6	15	C	M	SCL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

2005-2023 NAIP imagery. OSA completed. Inconsistent signature area.

Remarks:

No wetland hydrology indicators observed, no saturation.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 20241317 46.47 Ac Kane Co City/County: Kane County Sampling Date: 2024-08-06

Applicant/Owner: Surya Powered State: Illinois Sampling Point: P2

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 22 T042N R007E

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

Slope (%): 0-2 Lat: 42.097742 Long: -88.394155 Datum: WGS84

Soil Map Unit Name: Harpster silty clay loam, 0 to 2 percent slopes NWI classification: None Depicted

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

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

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

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

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

Remarks:
Active ag field planted in corn. Not NC. APT analysis indicates climatic conditions are in the normal range.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Acer saccharinum*	2	N	FACW
2. *VERONICA ARVENSIS*	1	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	3.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	2.00	x 2 =	4.00
FAC species	0.00	x 3 =	0.00
FACU species	1.00	x 4 =	4.00
UPL species	0.00	x 5 =	0.00
Column Totals:	3.00 (A)		8.00 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Active ag field planted in corn. Sparse weeds. Corn crop healthy with 80% cover and approximately 7-8 ft height.

SOIL

Sampling Point: P2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	2.5Y 3/1	100					SIL	No redox
15-20	2.5Y 4/2	95	2.5Y 5/4	5	C	M	SICL	W/10% fine gravel
20-24	2.5Y 5/2	80	2.5Y 5/6	20	C	M	SIC	W/20% fine gravel

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

2005-2023 NAIP imagery. OSA completed. Inconsistent signature area.

Remarks:

No wetland hydrology indicators observed, no saturation.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 20241317 46.47 Ac Kane Co City/County: Kane County Sampling Date: 2024-08-06

Applicant/Owner: Surya Powered State: Illinois Sampling Point: P3

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 22 T042N R007E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 42.096481 Long: -88.394679 Datum: WGS84

Soil Map Unit Name: Harpster silty clay loam, 0 to 2 percent slopes NWI classification: None Depicted

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

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

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

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

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

Remarks:
Active ag field planted in corn. Not NC. APT analysis indicates climatic conditions are in the normal range.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Taraxacum officinale*	1	N	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	1.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	0.00	x 3 =	0.00
FACU species	1.00	x 4 =	4.00
UPL species	0.00	x 5 =	0.00
Column Totals:	1.00 (A)		4.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)
Active ag field planted in corn. Sparse weeds. Corn crop healthy with 80% cover and approximately 7-8 ft height.

SOIL

Sampling Point: P3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	2.5Y 3/1	100					SICL	No redox
9-15	2.5Y 5/3	60	2.5Y 5/4	7	C	M	SIC	Mixed matrix-
	2.5Y 3/1	33					SIC	transitional plow mixing
15-24	2.5Y 5/2	80	2.5Y 5/6	20	C	M	SIC	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

2005-2023 NAIP imagery. OSA completed. Inconsistent signature area.

Remarks:

No saturation. Drain tile thought to be present.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 20241317 46.47 Ac Kane Co City/County: Kane County Sampling Date: 2024-08-06

Applicant/Owner: Surya Powered State: Illinois Sampling Point: P4

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 22 T042N R007E

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

Slope (%): 3-7 Lat: 42.097953 Long: -88.396108 Datum: WGS84

Soil Map Unit Name: Drummer silty clay loam, 0 to 2 percent slopes NWI classification: None Depicted

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

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

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

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

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

Remarks:
Active ag field planted in corn. Not NC. APT analysis indicates climatic conditions are in the normal range.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *VERONICA ARVENSIS*	1	N	FACU
2. *Amaranthus retroflexus*	1	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	0.00	x 3 =	0.00
FACU species	2.00	x 4 =	8.00
UPL species	0.00	x 5 =	0.00
Column Totals:	2.00 (A)		8.00 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)
Active ag field planted in corn. Sparse weeds. Corn crop healthy with 80% cover and approximately 7-8 ft height.

SOIL

Sampling Point: P4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 3/1	100					SICL	No redox
15-24	2.5Y 5/2	93	2.5Y 5/4	7	C	M	SIC	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

2005-2023 NAIP imagery. OSA completed. Inconsistent signature area.

Remarks:

No wetland hydrology indicators observed, no saturation.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 20241317 46.47 Ac Kane Co City/County: Kane County Sampling Date: 2024-08-06

Applicant/Owner: Surya Powered State: Illinois Sampling Point: P5

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 22 T042N R007E

Landform (hillslope, terrace, etc.): Ridge Local relief (concave, convex, none): Convex

Slope (%): 3-7 Lat: 42.095995 Long: -88.399301 Datum: WGS84

Soil Map Unit Name: Brenton silt loam, 0 to 2 percent slopes NWI classification: None Depicted

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

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

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

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

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

Remarks:

APT analysis indicates climatic conditions are in the normal range.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Morus alba*	5	Y	FAC
2. *Rubus occidentalis*	3	Y	UPL
3.			
4.			
5.			
	8.0	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Bromus inermis*	90	Y	FACU
2. *Smilax ecirrhata*	5	N	UPL
3. *Urtica dioica*	3	N	FACW
4. *Solanum carolinense*	3	N	FACU
5. *Asclepias syriaca*	2	N	FACU
6.			
7.			
8.			
9.			
10.			
	103.0	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. ***Vitis riparia***	2	N	FACW
2.			
	2.0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	5.00	x 2 =	10.00
FAC species	5.00	x 3 =	15.00
FACU species	95.00	x 4 =	380.00
UPL species	8.00	x 5 =	40.00
Column Totals:	113.00 (A)		445.00 (B)

Prevalence Index = B/A = 3.94

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Brush-weed community line between ag fields.

SOIL

Sampling Point: P5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/1	100					SIL	No redox
20-24	10YR 4/2	60					SIL	Mixed matrix
	10YR 3/1	40					SIL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

2005-2023 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 20241317 46.47 Ac Kane Co City/County: Kane County Sampling Date: 2024-08-06

Applicant/Owner: Surya Powered State: Illinois Sampling Point: P6

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 22 T042N R007E

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

Slope (%): 0-2 Lat: 42.096469 Long: -88.400231 Datum: WGS84

Soil Map Unit Name: Brenton silt loam, 0 to 2 percent slopes NWI classification: None Depicted

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

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

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

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

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

Remarks:
Active ag field planted in corn. Not NC. APT analysis indicates climatic conditions are in the normal range.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	0.00	x 2 =	0.00
FAC species	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	0.00 (A)		0.00 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)
Active ag field planted in corn. No weeds present. Corn crop healthy with 80% cover and approximately 7-8 ft height. Assumed non-hydrophytic vegetation would prevail under NC based on the other parameters, the OSA, and professional judgment.

SOIL

Sampling Point: P6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/1	100					SICL	No redox
12-16	2.5Y 4/2	60	2.5Y 5/4	5	C	M	SICL	Mixed matrix-
	2.5Y 4/1	35					SICL	transitional plow mixing
16-24	2.5Y 5/3	85	2.5Y 5/6	15	C	M	SIC	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

2005-2023 NAIP imagery. OSA completed. Inconsistent signature area.

Remarks:

No saturation. Drain tile thought to be present.

Appendix D | Site Photographs

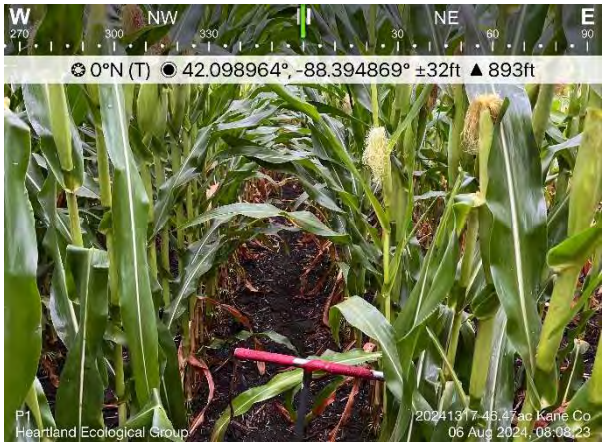


Photo #1 Sample point P1

Photo #2 Sample point P1

Photo #3 Sample point P1

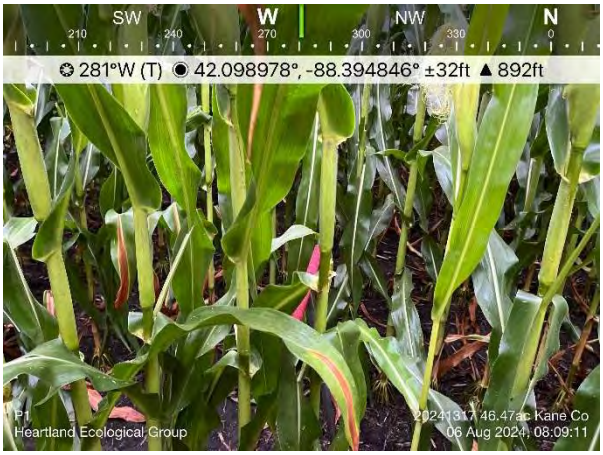


Photo #4 Sample point P1

Photo #5 Sample point P2

Photo #6 Sample point P2

Photo #7 Sample point P2

Photo #8 Sample point P2

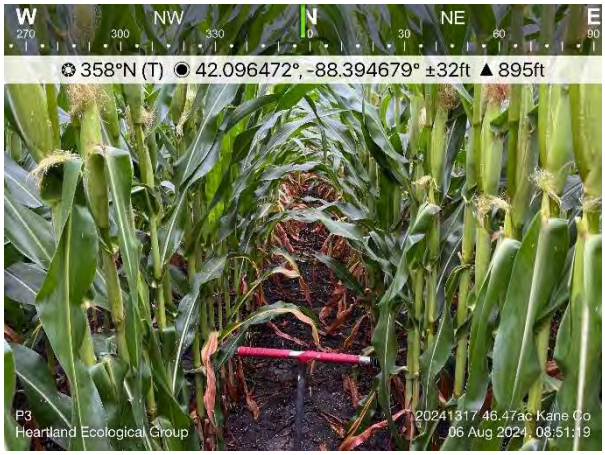


Photo #9 Sample point P3

Photo #10 Sample point P3

Photo #11 Sample point P3

Photo #12 Sample point P3

Photo #13 Sample point P4

Photo #14 Sample point P4

Photo #15 Sample point P4

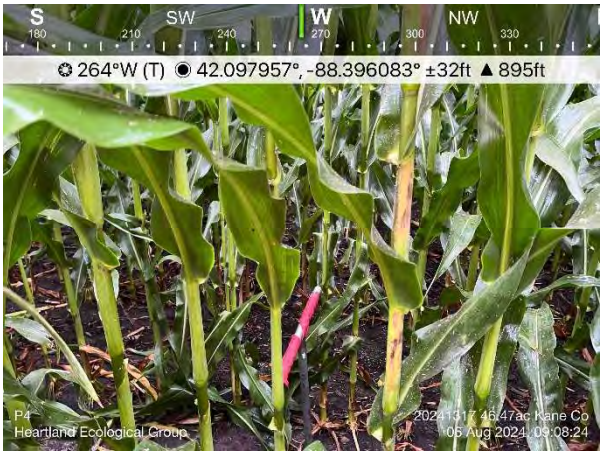


Photo #16 Sample point P4

Photo #17 Sample point P5

Photo #18 Sample point P5

Photo #19 Sample point P5

Photo #20 Sample point P5

Photo #21 Sample point P6

Photo #22 Sample point P6

Photo #23 Sample point P6 with Pond 1 visible in the background

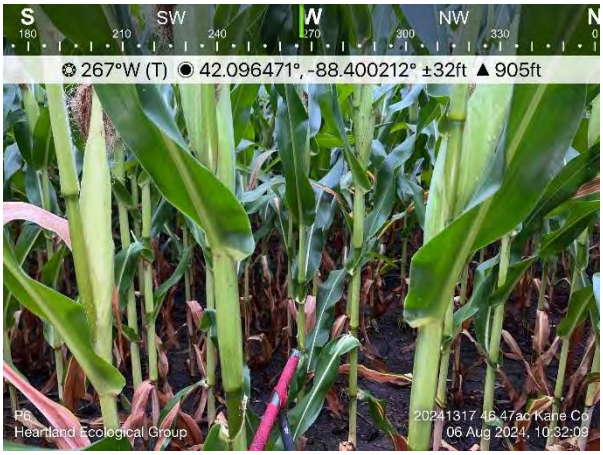


Photo #24 Sample point P6

Appendix E | Delineator Qualifications

Heartland
ECOLOGICAL GROUP INC

Eric C. Parker, SPWS

Principal Scientist
506 Springdale Street
Mount Horeb, WI 53572
eric@heartlandecological.com
(414) 380-0269

Mr. Parker is a Senior Professional Wetland Scientist and Professionally Assured Wetland Delineator in Wisconsin with 35 years of experience assisting public and private clientele. He has completed wetland projects in other states including IL, IN, OH, MI, ND, MO, PA, TX, MD, VA, and NC. His work has supported thousands of institutional, commercial, utility, residential, industrial & transportation projects. Mr. Parker's natural resource specialties include botanical surveys, wetland science, restoration and mitigation, and environmental corridor mapping. He has a widespread understanding of the scientific, technical, and regulatory aspects of natural resources projects. His interests also include floristic quality assessment (FQA) and wetness categorization of plant species.

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

Education

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

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

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

Basic Wetland Delineation Training Wisconsin Dept. of Administration Waukesha, WI, 1997

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

Advanced Wetland Delineation, U. of WI - La Crosse, Bayfield County, WI, 2001

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

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

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

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

Registrations

Senior Professional Wetland Scientist #838, (SPWS), Society of Wetland Scientists Professional Certification Program, 1995-current

Certified Wetland Scientist #C-058, (CWS), Stormwater Management Commission Lake County, IL, 2002-current

Qualified Wetland Review Specialist #W-057, (QWRS), Kane County, IL, 2006-current

Project Experience

Wetland Delineation & Regulatory Support

2022 Wetland Delineations, Exemption Submittals, and Permitting (104 sites)

Capitol Dr Property, Waukesha Co., WI (Jan); Puetz Rd Property, Milwaukee Co., WI (Jan); Glas Driveway Wetlands and GP, Kenosha Co., (Mar); 19555 W Lincoln Ave GP, Waukesha Co., WI (Mar); Northern Oaks Subd GP-AWER, Waukesha Co., WI (Mar);Workman Properties, Waukesha Co., WI (Apr); 5732 W Rawson Av, Milwaukee Co., WI (Apr); 2705 West Rd, Racine Co., WI (Apr); CTH CW Site, Dodge Co., WI (Apr); 4-Mile Rd Property, Racine Co., WI (Apr); Kurtze Ln Property, Waukesha Co., WI (Apr); 128th St Parcel, Kenosha Co., WI (Apr); Thomas Property Wetlands-PEC-Navigability, Waukesha Co., WI (Apr); Ament Property, Racine Co., WI (Apr); W3970 South Shore Dr, Walworth Co., WI (Apr); N2280 Temperance Tr, Walworth Co., WI (Apr); S Clark St Parcel, Dodge Co., WI (Apr); Deer Haven GC, Waukesha Co., WI (May); Petrie Rd 7.5 Ac Parcel, Walworth Co., WI (Apr); 5.5Ac Parcel Mukwonago, Waukesha Co., WI (Apr); S107 W16311 Loomis Rd Parcel, Waukesha Co., WI (Apr); CTH A & USH 12 Property, Walworth Co., WI (Apr); Cape Crossing NFE, Milwaukee Co., WI (Apr); Teipner Parcel, Waukesha Co., WI (Apr); Lichner Parcel, Waukesha Co., WI (Apr); Biocut Systems Site AWER, Waukesha Co., WI (Apr); Spring St Parcels, Racine Co., WI (May); US41 Corridor, Waukesha Co., WI (Apr); Reddelien Rd Parcel, Waukesha Co., WI (May); Watertown Rd Property, Waukesha Co., WI (May); 10027 Camelot Dr, Racine Co., WI (May); Koller Property, Ozaukee Co., WI (May); Altschaefl Property, Waukesha Co., WI (May); Pipito Property Pond, Dodge Co., WI (May); Kenora Rd Parcels, Waukesha Co., WI (May); Moorland & Greenfield Wetlands-AWER, Waukesha County, WI (May); Alliant Edgewater GS, Sheboygan Co., WI (May); Arbet North Parcel, Kenosha Co., WI (May); Pleasant Prairie Police Station, Kenosha Co., WI (May); 3rd Ave Pleasant Prairie Site, Kenosha Co., WI (May); 10766 N Torrey Dr Property, Ozaukee Co., WI (Jun); Kolnick Parcel, Kenosha Co., WI (Jun); Gateway Dr Watertown, Jefferson Co., WI (Jun); Green Bay Gardens Site, Kenosha Co., WI (Jun); DuCharme Property Wetlands-PEC, Waukesha Co., WI (Jun); 2301 Lakeshore Dr. GP-Tree Survey, Ozaukee Co., WI (Jun); 641 Drexel Wetlands-GP, Milwaukee Co., WI (Jun); Quigley Farm, Washington Co., WI (Jun); Big Bend Business Park, Waukesha Co., WI (Jun); Lad Lake Property, Waukesha Co., WI (Jun); Pleasant Prairie PP Utility Corridor, Kenosha Co., WI (Jul); Pleasant Prairie Fire Station 3, Kenosha Co., WI (Jul); CTH H Parcels, Walworth Co., WI (Jul); Oakwood Rd Parcels, Milwaukee Co., WI (Jul); Big Bend Rd Property, Waukesha Co., WI (Jul); Heartland Communities, Racine Co., WI (Jul); Leo Living Bristol Wetlands-PEC, Kenosha Co., WI (Jul); Stream Conservation Union Grove, Racine Co., WI (Jul); 8979 S 42nd St Franklin, Milwaukee Co., WI (Jul); 2205 Silvernail Rd, Waukesha Co., WI (Jul); East Wolf Run Mukwonago, Waukesha Co., WI (Jul); 1302 Roundtable Dr, Racine Co., WI (Jul); Corporation Parcel Dover, Racine Co., WI (Jul); 11925 W Lake Park Dr, Milwaukee Co., WI (Jul); 17905 W Capitol Dr Parcel, Waukesha Co., WI (Jul); Mosconi West Property, Kenosha Co., WI (Jul); Promise Builders Site, Kenosha Co., WI (Jul); Highland Dr Menomonee Falls Botanical Survey, Waukesha Co., WI (Aug); METRO RDF Expansion, Milwaukee Co., WI (Aug); 5.53 Ac Mukwonago Site, Waukesha Co., WI (Aug); Northstar Beloit Site, Rock Co., WI (Aug); Wirth Farm PEC-AWER-Tree Survey, Ozaukee Co., WI (Aug); Olympia Fields Wetlands-AWER, Waukesha Co., WI (Aug); Maple Rd Softball Field, Washington Co., WI (Aug); Blise Property Pond, Washington Co., WI (Aug); St. Johns NW Military Academy Wetlands-PEC, Waukesha Co., WI (Aug); Wildwood Property Wetlands-Navigability, Walworth Co., WI (Aug); Goldendale Rd Property, Washington Co., WI (Aug); 6951 S Lovers Lane, Milwaukee Co., WI (Aug); Klumb Property Wetlands-Corridor, Waukesha Co., WI (Aug); Ulao Creek Residential, Ozaukee Co., WI (Sep); Grand Hills Castle Expansion GP, Waukesha Co., WI (Sep); 31110 82nd St Property, Kenosha Co., WI (Sept); Miller Property Wetlands-SEC, Waukesha Co., WI (Sep); Townline Rd Water Main Wetlands-GP, Waukesha Co., WI (Sep); Sanctuary at Good Hope East PEC, Waukesha Co., WI (Oct); Kutzler Express Property, Kenosha Co., WI (Oct); 47th Ave Property, Kenosha Co., WI (Oct); Steinbrink Property, Kenosha Co., WI (Oct); Caledonia Developments, Racine Co., WI (Oct); DeGrave Farm, Racine Co., WI (Oct); Nettesheim Farm Pewaukee, Waukesha Co., WI (Oct); Fisher-Barton Property, Waukesha Co., WI (Oct); BRP shipyard Sturtevant, Racine Co., WI (Oct); CTH C Site Sheboygan Falls, Sheboygan Co., WI (Oct); Willabay Meadows Residential, Walworth Co., WI (Oct); Thode Dr Property, Waukesha Co., WI (Oct); Middle Rd Property Wetlands-AWER, Racine Co., WI (Oct); Three Pillars Dousman Ph1A, Waukesha Co., WI (Oct); Primrose School Site Brookfield, Waukesha Co., WI (Oct); Grand Geneva Housing Site, Walworth Co., WI (Nov); 2651 Fuller Rd Site, Rock Co., WI (Nov); Willis Ray Rd Property, Walworth Co., WI (Nov); Harding Dr Menomonee Falls Site, Waukesha Co., WI (Nov).

2021 Wetland Delineations, Exemption Submittals, and Permitting (95 sites)

CTH CW Property Exemption, Jefferson Co., WI (Jan); BP Parcel Determination, Kenosha Co., WI (Mar); Narula Property, Kenosha Co., WI (Apr); So Wi Veterans Mem Cemetery, Racine Co., WI (Apr); N. 70th St. Site, Milwaukee Co., WI (Apr); 6th & Grange Site, Milwaukee Co., WI (Apr); North Lake Dr Site, Racine Co.,

WI (Apr); E. Lakeshore Dr Property, Kenosha Co., WI (Apr); Deaton Parcel Exemption, Kenosha Co., WI (Apr); Alliant Energy Solar Site, Sheboygan Co., WI (Apr); Breg-3 Site Exemptions, Milwaukee Co., WI (Feb); Bristol Highlands, Kenosha Co., WI (Apr); Sandalwood Lot 20, Oconto Co., WI (Apr); Martin Rd Parcels, Waukesha Co., WI (Apr); Fair Meadow Subd Exemption, Walworth Co., WI (Apr); Will Rose Haven GP, Waukesha Co., WI (Apr); Bristol Property Wetlands & Exemption, Kenosha Co., WI (Apr); 11900 N Port Washington Rd, Ozaukee Co., WI (Apr); Gibbs Parcel, Kenosha Co., WI (May); Schaefer Farm, Racine Co., WI (May); Lisbon 12-Ac Parcel, Waukesha Co., WI (May); Coach Hills Exemptions, Racine Co., WI (May); Ventimiglia Property, Oconto Co., WI (May); Case HS Property, Racine Co., WI (May); Warntjes North-South Parcels, Kenosha Co., WI (May/Jul); CSM 3325 Dover, Racine Co., WI (May); STH 175 Parcel, Washington Co., WI (May); Holy Hill Rd Property, Washington Co., WI (May); Lyons Parcel Determination, Walworth Co., WI (May); CSM 3591 Mequon, Ozaukee Co., WI (May); Parcel 293-0965 Pleasant Prairie, Kenosha County, WI (May); Denoon Country Estates Muskego, Waukesha Co., WI (May); Blaze Landscaping Lisbon Parcel Wetlands-Exemption, Waukesha Co., WI (Jun); Hughes Parcel wetlands-Woodlands-PEC, Racine Co., WI (Jun); Logan Parcel, Washington Co., WI (May); CTH LL Property, Ozaukee Co., WI (Jun); Steenburg Farm Oakridge, Fond du Lac Co., WI (Jun); Steenburg Farm Dallman, Fond du Lac Co., WI (Jun); UW Parkside Utility Renovations, Kenosha County, WI (May); Salem Lakes Parcel 70412, Kenosha County, WI (Jun); Russet Ct Muskego Site, Waukesha Co., WI (Jun); Kazmierczak Property, Washington Co., WI (Jun); Parcel 152-0100 Pleasant Prairie, Kenosha Co., WI (Jun); 59-Acre Parcel Lisbon Property, Waukesha Co., WI (Jun); 98th St Parcel Randall, Kenosha Co., WI (Jun); Ryan Rd 80-Ac Site, Milwaukee Co., WI (Jul); Hickory Hill West Wetland-PEC Lisbon, Waukesha Co. WI (Jun); Cranberry Creek Landvill, Wood Co., WI (Jul); Christina Estates Outlot 1 Exemption, Racine Co., WI (Jul); LG House of Music Property, Walworth Co., WI (Jul); STH 158-I94 Property, Kenosha Co., WI (Aug); 3-Mile Rd Property, Racine Co., WI (Jul); Price Parcel Ottawa, Waukesha Co., WI (Jul); Lot 1 Lilac Rd Rubicon, Dodge Co., WI (Aug); 633 Progress Dr Determination, Ozaukee Co., WI (Jul); I41 & STH60 Property Slinger, Washington Co., WI (Aug); Summit Parcel 0708985 Determination, Waukesha Co., WI (Aug); Timberline Trail Landfill Wetlands and Exemption, Rusk Co., WI (Aug); Seasons at Mt Pleasant Sewer, Racine Co., WI (Aug); Kenny Dr Lots 1-2, Washington Co., WI (Aug); Bliffert Lumber Germantown, Washington Co., WI (Aug); Gibson Parcels Eagle Site, Waukesha Co., WI (Aug); Clover Run Stables, Racine Co., WI (Sep); Pink Property Salem Lakes GP, Kenosha Co., WI (Sep); Albano Property Carol Beach, Kenosha Co., WI (Sep); Mosconi Parcel Somers, Kenosha Co., WI (Sep); Petrie Rd Property Geneva, Walworth Co., WI (Sep); NML Property Oak Creek, Milwaukee Co., WI (Sep); Carol Beach Estates, Kenosha Co., WI (Sep); Mt. Pleasant Business Ctr Site, Racine Co., WI (Sep); Pleasant Prairie Power Plant, Kenosha Co., WI (Sep); STH 31 Property, Racine Co., WI (Sep); 112th St Expansion Parcel, Milwaukee Co., WI (Oct); Glacier Ridge Landfill EC Site, Dodge Co., WI (Sep); City-View Subdivision Horicon, Dodge Co., WI (Sep); Rock Rd Co Beloit, Rock Co., WI (Oct); Glass Parcels Richfield, Washington Co., WI (Oct); Alliant Clinton Substation, Rock Co., WI (Oct); Triggs Property Delafield, Waukesha Co., WI (Oct); Singh Parcel Franklin, Milwaukee Co., WI (Oct); Hilmer Property Muskego, Waukesha Co., WI (Oct); Baseler Property Muskego, Waukesha Co., WI (Oct); ALDI Property Oak Creek, Milwaukee Co., WI (Oct); Plank Rd Property Burlington, Racine Co., WI (Oct); Jackson Marsh Restoration Site, Washington Co., WI (Oct); Pilgrim Rd Parcel Brookfield, Waukesha Co., WI (Oct); Henneberry Parcel Muskego, Waukesha Co., WI (Oct); Ewig Parcel Franklin, Milwaukee Co., WI (Oct); STH 120 Site L Geneva, Walworth Co., WI (Oct); KMHS Wales, Waukesha Co., WI (Oct); 184th Ave Bristol Property, Kenosha Co., WI (Oct); 144th Ave Bristol Property, Kenosha Co., Pabst Rd Oconomowoc Site, Waukesha County, WI (Oct); N Lake Shore Dr Mequon, Ozaukee Co., WI (Nov); 28414 Wilmot Rd Salem Lakes, Kenosha Co., WI (Nov); 819 E Drexel Site, Milwaukee Co., WI (Nov).

2020 Wetland Delineations, Exemption Submittals, and Permitting (90 sites)

Courtney Street Storage Buildings, Racine Co., WI (Feb); 86th Ave & STH 165 Parcel, Kenosha Co., WI (Feb-Apr); Harris Gravel Pit, Dane Co., WI (Mar-Apr); Alliant Birnamwood Substation, Shawano Co., WI (Apr); Rolling Meadows Drive Parcel, Fond du Lac Co., WI (Apr); Lieds Nursery Site, Waukesha Co., WI (Apr); Plas-Tech Engineering Site, Walworth Co., WI (Apr); Fink Parcel, Racine Co., WI (Apr); Lot 1 Proposed CSM 3258, Racine Co., WI (Apr); Harris Gravel Pit, Dane Co., WI (May); Schumacher Rd Reconstruction, Dane Co., WI (Apr); Whitetail Ridge Ph2, Kenosha Co., WI (Apr), Kelly Pit Addition, Dane Co., WI (Apr); Myrtle Way Road Improvements, Rock Co., WI (Apr); Pewaukee Industrial Park South, Waukesha Co., WI (May); Mueller Property, Fond du Lac Co., WI (Apr); 3901 Kipp Street Site, Dane Co., WI (Apr); Witte Parcels, Dane Co., WI (Apr); Sandalwood Lots 7-8, Oconto Co., WI (Apr); Yellowstone Outdoor Resort, Lafayette Co., WI (Apr); S&L Underground Expansion, Columbia Co., WI (May); 200 Baraboo Street, Sauk Co., WI (May); Jefferson Pit, Jefferson Co., WI (May); Rock Point Village, Waukesha Co., WI (May); Blanchardville Coop Oil & NGSD Parcels, Green Co., WI (May); Logtown Development, Sauk Co., WI (Jun); Maple Ave Property, Waukesha Co., WI (May); Wanasek Property, Racine Co., WI (May); Meier Farms, Dane Co., WI (Jun); 76th & Ryan Site, Sauk Co., WI (May); Milton Townline Road Site, Rock County, WI (May); Somers Multi-family Site, Kenosha

Co., WI (May); Cazenovia WWTP Expansion, Waukesha Co., WI (Jun); Waukegan Property, Lake Co., IL (Jun); Ozaukee Christian School, Washington Co., WI (Jun); Kohler Distribution Center, Sheboygan Co., WI (Jun); Veterans Memorial Park West Site, Kenosha County, WI (Jun); Veterans Memorial Park East Site, Kenosha County, WI (Oct); Bristol Commons Site, Kenosha Co., WI (Jun); Barels Property, Racine Co., WI (Jun); Rogich Property, Milwaukee Co., WI (Jun); CTH MM Intersection Reconstruction, Dane Co., WI (Jul); Rose Property, Racine Co., WI (Jun); Baldev Court Property, Ozaukee Co., WI (Jul); Paul-Meghan Dominie Property, Dane Co., WI (Jul); Union Court Site, Kenosha Co., WI (Jul); Webcrafters Parcels, Dane Co., WI (Jul); Site Security Upgrades Site, Waukesha Co., WI (Jul); Scuppernong Creek Site, Waukesha Co., WI (Jul); W9030 Oak Ridge Road Property, Jackson Co., WI (Jul); Cherokee Golf Course, Dane Co., WI (Aug); W3948 South Shore Drive, Walworth Co., WI (Aug); Caledonia Multifamily Site, Racine Co., WI (Aug), Mittelstaedt Property, Sauk Co., WI (Aug); 1525 Bryce Drive Parcel, Winnebago Co., WI (Sep); Platten Property, Outagamie Co., WI (Sep); St. Mary's Springs Site, Fond du Lac Co., WI (Sep); Fairway Village Site, Ozaukee Co., WI (Sep); Quarry Park Site, Waukesha Co., WI (Sep); CTH F-Concord Site, Jefferson Co., WI (Sep); HJ Williams Farm, Adams Co., WI (Oct); STH 16-Lisbon Rd Parcel, Waukesha Co., WI (Sep); Golden Lake Road Property, Waukesha Co., WI (Sep); 4522 CTH P Parcel, Washington Co., WI (Sep); Darby Farms, Kenosha Co., WI (Sep); 227 Sussex Street, Waukesha Co., WI (Sep); Lexus of Brookfield Site, Milwaukee Co., WI (Sep); Wesner Greenfield Ave Parcels, Waukesha Co., WI (Sep); Oriole Lane Parcels, Ozaukee Co., WI (Oct); Wayside Parkview Estates, Brown Co., WI (Sep); Wind Point Parcel, Racine Co., WI (Oct); Geneva National Lot 18-23, Walworth Co., WI (Oct); Badger Farm, Racine Co., WI (Oct); Dorset Corners Substation, Monroe Co., WI (Sep); Covered Bridge Rd Site, Ozaukee Co., WI (Oct); Trek Distribution Center, Jefferson Co., WI (Oct); Craftsman Drive Parcel, Waukesha Co., WI (Oct); Village Green Subdivision, Ozaukee Co., WI (Oct); Ansay Farm, Ozaukee Co., WI (Oct); Zenner Farm Property, Racine Co., WI (Oct); West Snell Rd Site, Winnebago Co., WI (Oct); Kenosha County Bridges, Kenosha Co., WI (Oct); Confidential Site Janesville, Rock Co., WI (Oct); Janesville Airport Site, Rock Co., WI (Oct); 10920 West Liberty Drive, Milwaukee Co., WI (Oct); V of River Hills 53-Acre Site, Milwaukee Co., WI (Oct); Hwy 14 & Lacy Rd Site, Dane Co., WI (Oct); Wilderness Way Parcel, Waukesha County, WI (Oct); Hummingbird Lane Parcel, Sheboygan Co., WI (Oct); Plainview Rd Site, Waukesha Co., WI (Nov); Delimat Property, Kenosha Co., WI (Nov); 11900 N Port Washington Rd Parcel, Ozaukee Co., WI (Nov); Canopy Hills Artificial Wetland, Racine Co., WI (Dec); Strauss Brands Facility, Milwaukee County, WI (Dec).

2019 Wetland Delineations, Exemption Submittals, and Permitting (39 sites)

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

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

Homestead Acres, Racine Co., WI (Apr); Greenmeadows, Racine Co., WI (Apr), Wind Point School, Racine Co., WI (Apr); Vintage Parc East, Kenosha Co., WI (Apr); Nelson-Heckel, Kenosha Co., WI (Apr); Caledonia Storage, Racine Co., WI (Apr); New Berlin Storage, Waukesha Co., WI (Mar); Manke Gravel Pit, Columbia

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

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

Back 40 Mine, Menominee Co., MI (Jan); Oakdale Rd Site, Waukesha Co., WI (Sep), Birds Eye Foods, Walworth Co., WI (Sep); Boss Property, Leelanau Co., MI (Jul); Brighton Estates, Waukesha Co., WI (Sep); Saltzman North, Waukesha Co., WI (Sep); Susnar Parcel, Waukesha Co., WI (Sep); Wrenwood Site, Washington Co., WI; Chorneyko Site, Walworth Co., WI (Apr); CN Railroad Bridges-6 Sites, Fond du Lac & Winnebago Co's, WI; CN Railroad Freeport Culvert, Kane Co., IL (May); Herrling Site, Dane Co., WI (Sep); MMSD Sewerage Project, Milwaukee Co., WI (May); Spring St Site, Racine Co., WI (Oct); Goshen Midway Cell Tower, Elkhart Co., IN (Apr); Two Creeks Utility Site, Manitowoc Co., WI (Nov); Suncast Site, Kane Co., IL (Dec); Lot 51 Lakeview Corp Park, Kenosha Co., WI (Oct); Lakefront Gun Range, Racine Co., WI (Oct); WI Club Golf Course, Milwaukee Co., WI (Apr); WisDOT Improvements, STH 32 Racine Co (Aug), STH 67 Walworth Co. (Sep), STH 20, Racine Co. (Oct), 27th St, Milwaukee Co. (Sep); Conference Point Boat Launch, Walworth Co., WI (Oct); Lake View RR Corridor, Portage Co., WI (Sep).

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

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

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

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

Example 2012 Wetland Delineations in WI, IL, IN, and TX (Mostly Large Projects)
West Central Lateral (190 miles), Eau Claire, Clark, Jackson & Monroe Co's, WI (Sep-Nov); Morrison Creek

Cranberry Parcel, Jackson Co., WI (Aug); London Mitigation Site, Jefferson Co., WI (July); Southern Access Pipeline, Sawyer & Washburn Co's, WI (Jun); I-80 Interchange, LaPorte Co., IN (Mar); Eagle-Ford Shale Plays, LaSalle & McMullen Co's, TX (Jan-Feb).

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

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

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

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

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

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

Appendix F | Off-Site Analysis

Heartland ECOLOGICAL GROUP INC

Field data sheet reference (if applicable): _____

TABLE A1

Wetland Hydrology from Aerial Imagery - Recording Form*

Project Name: **46.47 Acre Site** *Date:* **8/6/2024** *County:* **Kane**

Investigator: **Eric C. Parker, SPWS** *Legal Description (T, R, S):* **42N** **R07E** **Sec. 22**

Summary Table

Date Image Taken (M-Y)	Image Source	Climate Condition (wet, dry, normal)	Image Interpretation(s) See OSA Signature Areas image for general outlines of Areas 1-4				
			Area: 1 (P1)	Area: 2	Area: 3 (P6)	Area: 4 (P3)	Comments
21-Mar-99	Google Earth™	Normal	SS	SS	SS	SS-	
15-Apr-02	Google Earth™	Normal	SS	NV NSS	SS	NV NSS	
30-Jun-05	Google Earth™	Dry	NV NSS	NV NSS	NV NSS	NV NSS	
6-Aug-05	NAIP	Dry	NV NSS	NV NSS	NV NSS	NV NSS	
2-Jun-06	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
1-Aug-06	NAIP	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
6-Jun-07	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
21-Jul-07	NAIP	Dry	NV NSS	NV NSS	NV NSS	NV NSS	
10-Oct-07	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
3-May-08	Google Earth™	Wet	NV NSS	NV NSS	NV NSS	NV NSS	
6-Aug-09	NAIP	Normal	SS-	NV NSS	CS	CS-	
27-May-10	Google Earth™	Normal	SS	SS	SS	SS	
23-Jun-10	Google Earth™	Normal	NV NSS	NV NSS	CS	CS	
1-Jul-10	NAIP	Normal	NV NSS	NV NSS	CS-	CS-	
26-Aug-11	NAIP	Wet	CS DO	CS DO	CS DO	CS	
19-Jun-12	NAIP	Dry	NV NSS	NV NSS	NV NSS	NV NSS	
2-Apr-13	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
13-Jun-14	NAIP	Normal	SS-	NV NSS	SS-	NV NSS	
12-May-15	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
2-Jun-15	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
13-Jun-15	NAIP	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
16-Sep-15	NAIP	Wet	CS-	NV NSS	NV NSS	NV NSS	Pipeline repair, tile signatures
26-Jun-16	Google Earth™	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
7-Apr-17	Google Earth™	Normal	SS-	SS-	SS-	SS	Tile signatures
1-Sep-17	NAIP	Normal	NV NSS	NV NSS	NV NSS	NV NSS	Repair scar, tile signatures
6-Jul-18	Google Earth™	Wet	NV NSS	NV NSS	NV NSS	NV NSS	
14-Sep-19	NAIP	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
7-Jun-20	Google Earth™	Wet	NV NSS	NV NSS	NV NSS	NV NSS	
5-Sep-21	NAIP	Normal	NV NSS	NV NSS	NV NSS	NV NSS	
16-Aug-23	MAXAR	Normal	NV NSS	NV NSS	NV NSS	NV NSS	

Normal Climate Condition	Area: 1 (P1)	Area: 2	Area: 3 (P6)	Area: 4 (P3)	
Number of Normal Images	21	21	21	21	
Number with wet signatures	6	3	8	6	
Percent with wet signatures	29%	14%	38%	29%	

Key		
WS - Wetland Signature	SS - Soil Wetness Signature	CS - Crop Stress
NC - Not Cropped	AP - Altered Pattern	NV - Normal Vegetative Cover
DO - Drowned Out	SW - Standing Water	NSS - No Soil Wetness Signature
Other labels or comments:		

- Use above key to label image interpretations. It is imperative that the reviewer read and understand the guidance associated with the use of these labels. If alternate labels are used, indicate in box above.

* Images that were taken after the 20th of their respective month were evaluated under the following month's table to account for otherwise missing preciitation data from the start of the month to the date the image was recorded.

- If less than five (5) images taken during normal climate conditions are available, use an equal number of images taken during wet and dry climate conditions and use as many images as you have available. Describe the results using this methodology in your report.

* Source: http://www.bwsr.state.mn.us/wetlands/delineation/Guidance_for_Offsite_Hydrology_and_Wetland_Determinations.pdf

Heartland ECOLOGICAL GROUP INC

Field data sheet reference (if applicable): _____

Wetland Determination from Aerial Imagery - Recording Form*

Project Name: **46.47 Acre Site** *Date:* **8/6/2024** *County:* **Kane**

Investigator: **Eric C. Parker, SPWS** *Legal Description (T, R, S):* **42N** **R07E** **Sec. 22**

Use the decision matrix below to create Table A2

Hydric Soils Present?[1]	Identified on NWI or WWI?[2]	Percent with Wet Signatures from TABLE A1	Field Verification Required?[3]	Wetland?
Yes	Yes	>50%	No	**Yes**
Yes	Yes	30-50%	No	**Yes**
Yes	Yes	<30%	Yes	**Yes, if other hydrology indicators are present**
Yes	No	>50%	No	**Yes**
Yes	No	30-50%	Yes	**Yes, if other hydrology indicators are present**
Yes	No	<30%	No	**No**
No	Yes	>50%	No	**Yes**
No	Yes	30-50%	No	**Yes**
No	Yes	<30%	No	**No**
No	No	>50%	Yes	**Yes, if other hydrology indicators are present**
No	No	30-50%	Yes	**Yes, if other hydrology indicators are present**
No	No	<30%	No	**No**

[1] The presence of hydric soils can be determined from the "Hydric Rating by Map Unit Feature" under "Land Classifications" from the Web Soil Survey. "Not Hydric" is the only category considered to not have hydric soils. Field sampling for the presence/absence of hydric soil indicators can be used in lieu of the hydric rating if appropriately documented by providing completed field data sheets.

[2] At minimum, the most updated NWI data available for the area must be reviewed for this step. Any and all other local or regional wetland maps that are publically available should be reviewed.

[3] Area should be reviewed in the field for the presence/absence of wetland hydrology indicators per the applicable 87 Manual Regional Supplement, including the D2

TABLE A2

Area	Hydric Soils Present?[1]	Identified on NWI ?	Percent with Wet Signatures from TABLE A1	Other Hydrology Indicators Present?[1]	Wetland?	Comments
1	No	No	29%	No	**No**	Non-hydric soils field verified
2	No	No	14%	No	**No**	Non-hydric soils field verified
3	No	No	38%	Yes	**Yes (?)**	Non-hydric soils field verified
4	No	No	29%	Yes	**No**	Non-hydric soils field verified

[1] Answer "N/A" if field verification is not required and was not conducted.

* Source: http://www.bwsr.state.mn.us/wetlands/delineation/Guidance_for_Offsite_Hydrology_and_Wetland_Determinations.pdf

Wetness Signature Areas

1

2

3

4

Study Area (47.54 ac)

0 100 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2011-08-26
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2011 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2005-08-06
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2005 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2006-08-01
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2006 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2007-07-21
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2008 NAIP
USDA

LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2009-08-06
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2009 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2010-07-01
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2010 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2011-08-26
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2011 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2012-06-19
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2012 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2014-06-13
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2014 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2015-09-16
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2015 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2017-09-01
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2017 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2019-09-14
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2019 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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Appendix: 2021-09-05
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2021 NAIP
USDA
LRR: NCNE

Figure Created: 7/29/2024

Study Area (47.54 ac)

0 100 200 Ft

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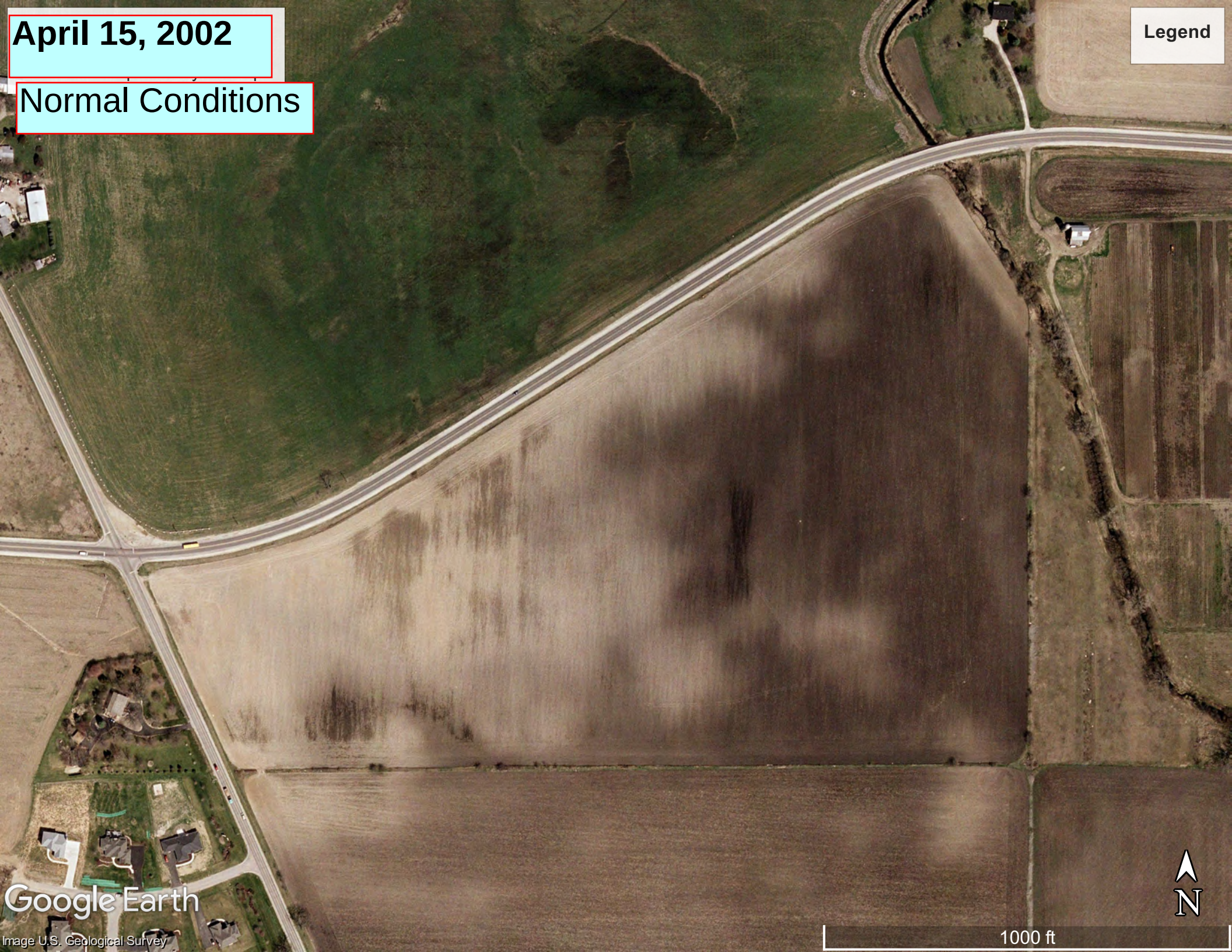
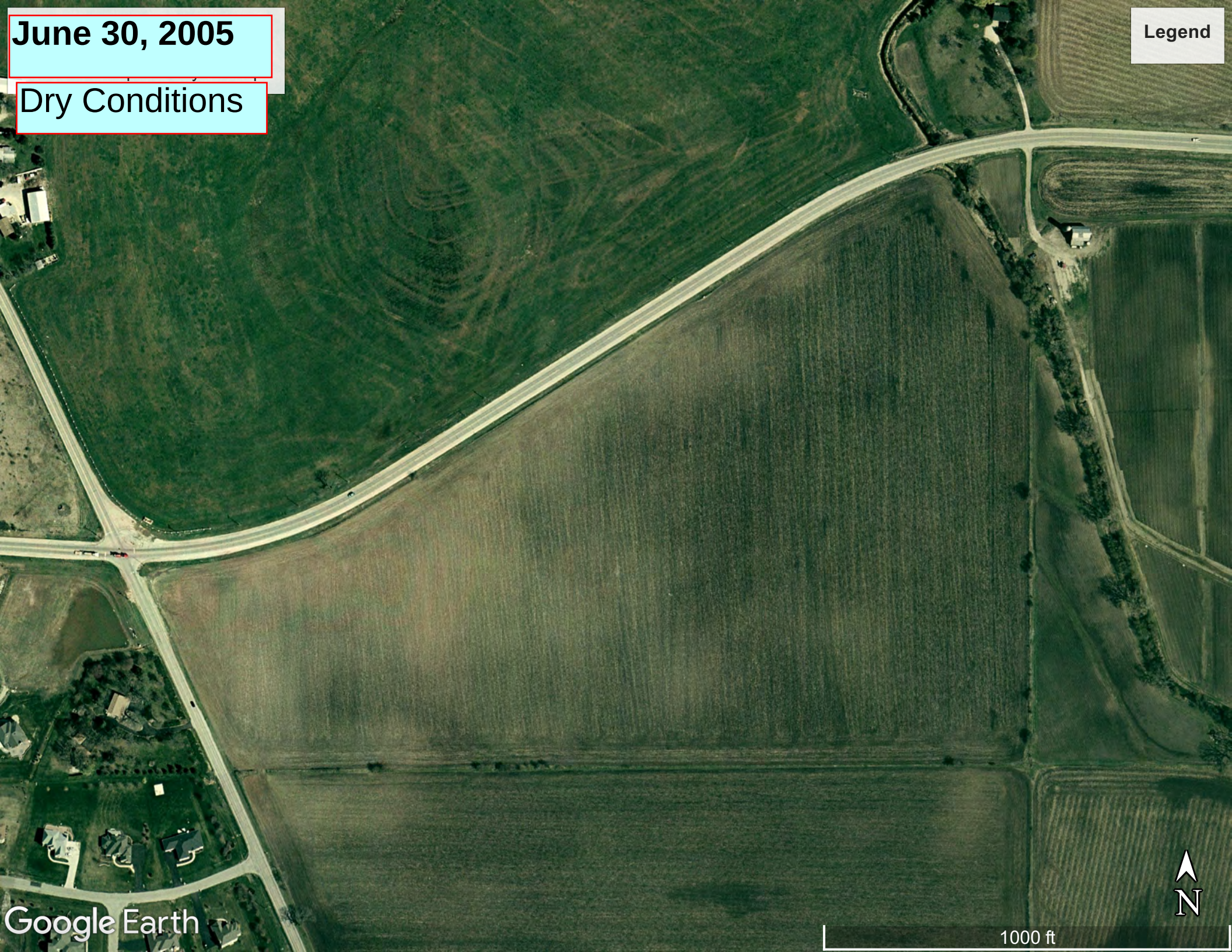
Appendix: 2023-08-16
NAIP Aerial Imagery
46.67 Acre Parcel Kane County
Project #20241317
T42N, R7E, S22
T Rutland, Kane Co

2023 NAIP
USDA
LRR: NCNE

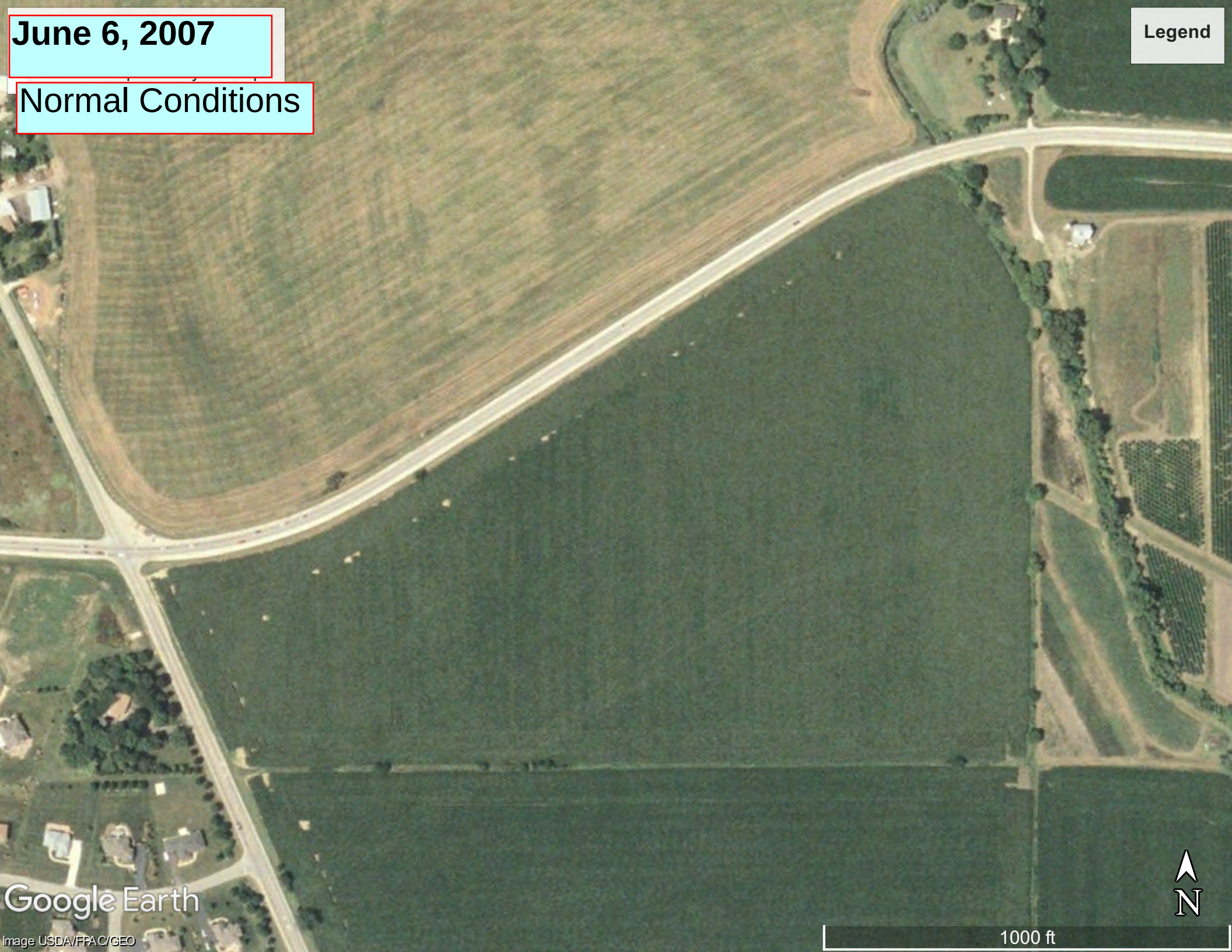
Figure Created: 7/29/2024


March 21, 1999
Normal Conditions
Legend
Google Earth
Image U.S. Geological Survey
N
1000 ft


April 15, 2002
Normal Conditions
Legend
Google Earth
Image U.S. Geological Survey
N
1000 ft


June 30, 2005
Dry Conditions
Legend
Google Earth
1000 ft
N


June 2, 2006
Normal Conditions
Legend
Google Earth
Image USDA/FPAC/GEO
N
1000 ft

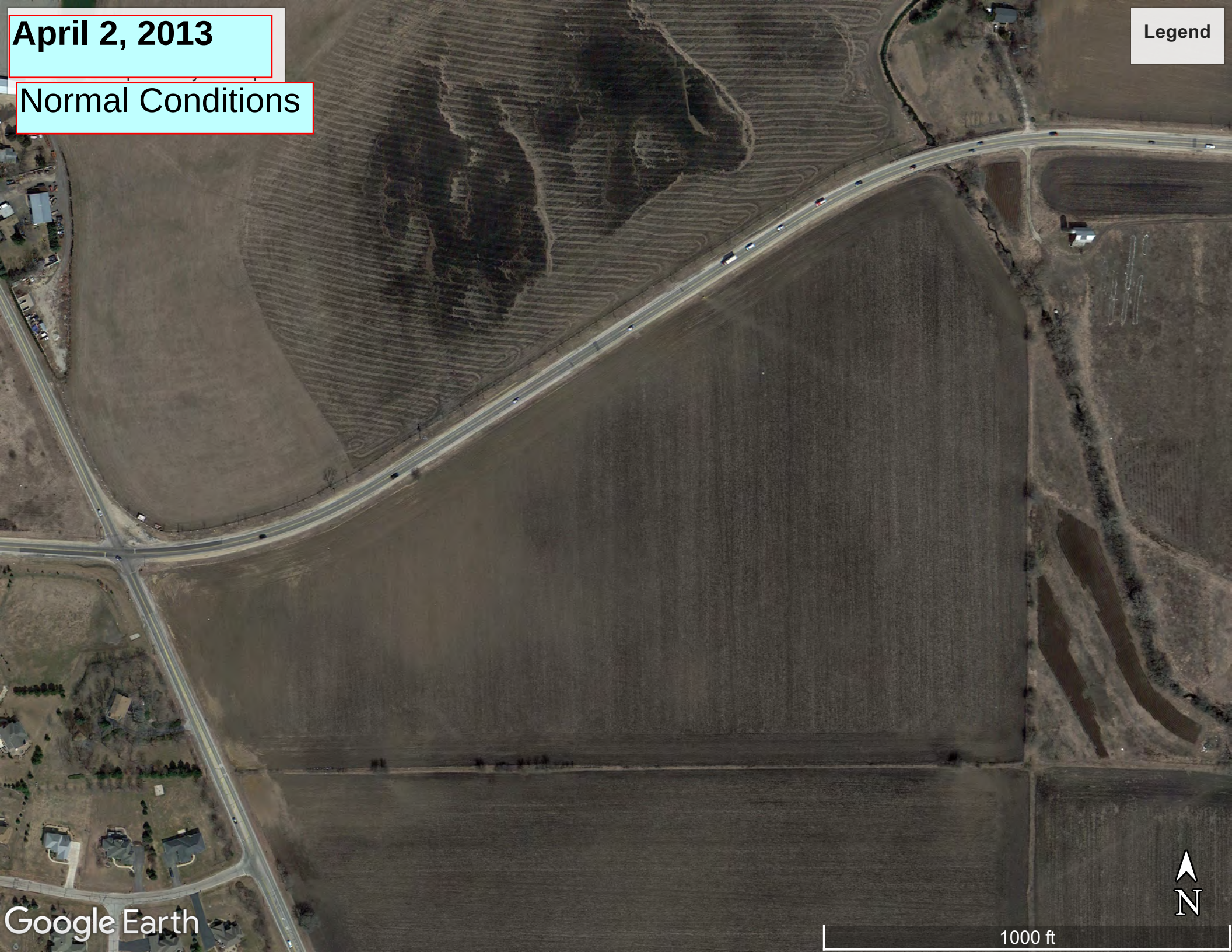

June 6, 2007
Normal Conditions
Legend
Google Earth
Image USDA/FPAC/GEO
N
1000 ft


October 10, 2007
Normal Conditions
Legend
Google Earth
1000 ft
N


May 3, 2008
Wet Conditions
Legend
Google Earth
Image U.S. Geological Survey
N
1000 ft


May 27, 2010
Normal Conditions
Legend
Google Earth
N
1000 ft


June 23, 2010
Normal Conditions
Legend
Google Earth
Image USDA/FPAC/GEO
N
1000 ft

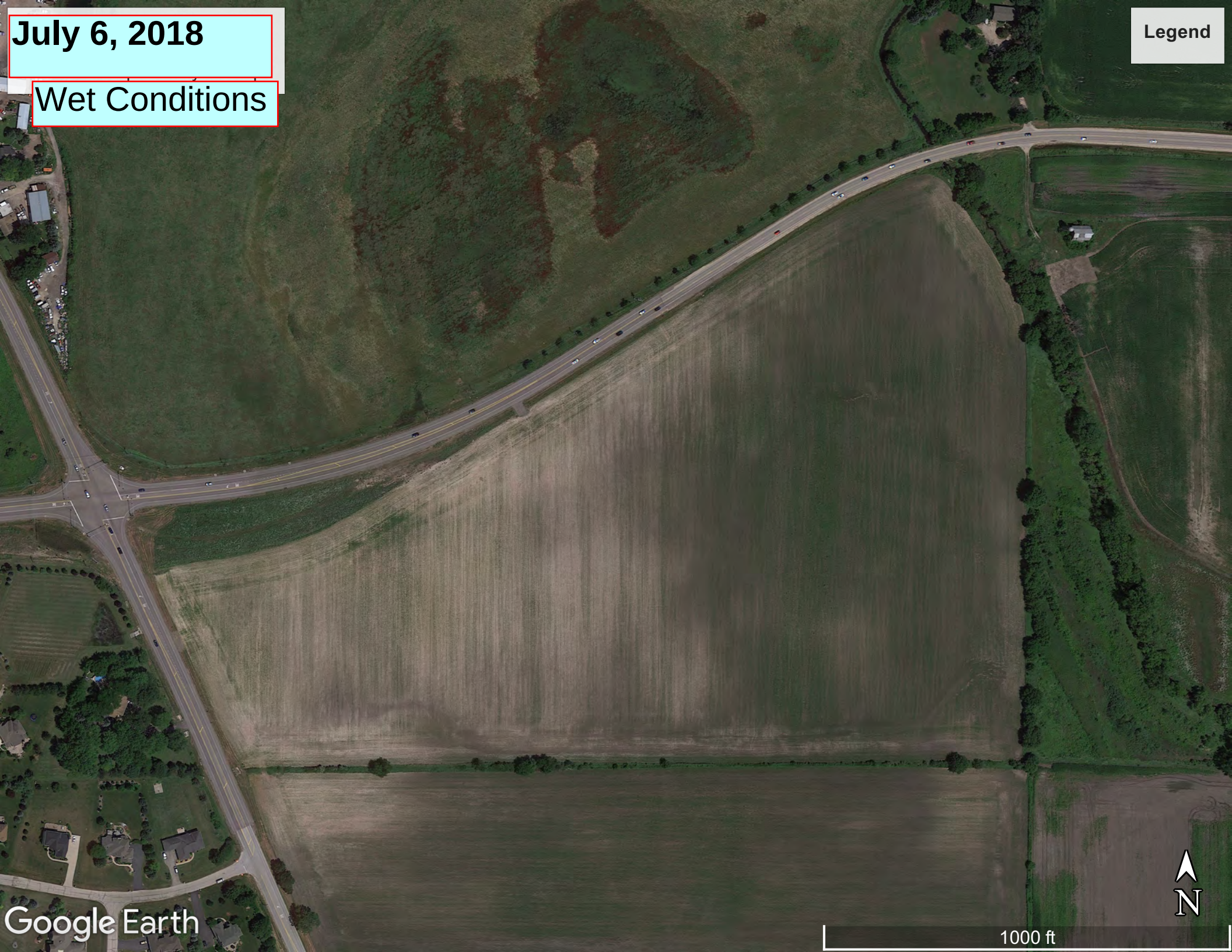

April 2, 2013
Normal Conditions
Legend
Google Earth
N
1000 ft


May 12, 2015
Normal Conditions
Legend
Google Earth
N
1000 ft


June 2, 2015
Normal Conditions
Legend
N
Google Earth
1000 ft


June 26, 2016
Normal Conditions
Legend
Google Earth
N
1000 ft


April 7, 2017
Normal Conditions
Legend
Google Earth
1000 ft
N


July 6, 2018
Wet Conditions
Legend
Google Earth
1000 ft
N


June 7, 2020
Wet Conditions
Legend
Google Earth
1000 ft
N

April Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	January	Weighted Precip	Feburary	Weighted Precip	March	Weighted Precip		
21-Mar-99	3.04	3	1.44	4	0.23	3	10	Normal
15-Apr-02	1.51	2	1.26	4	2.24	6	12	Normal
02-Apr-13	3.51	3	3.01	6	2.19	6	15	Wet
07-Apr-17	2.83	3	0.90	2	4.94	9	14	Normal
30% chance less than**	1.20		1.00		1.37			
30 Year Average**	1.85		1.83		2.26			
30% chance more than**	2.22		2.23		2.74			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

May Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	February	Weighted Precip	March	Weighted Precip	April	Weighted Precip		
5/3/08	3.92	3	1.89	4	4.53	9	16	**Wet**
5/12/15	1.45	2	1.28	2	3.14	6	10	**Normal**
30% chance less than**	1.00		1.37		2.80			
30 Year Average**	1.83		2.26		3.83			
30% chance more than**	2.23		2.74		4.51			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

June Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	March	Weighted Precip	April	Weighted Precip	May	Weighted Precip		
2-Jun-06	3.64	3	3.41	4	4.76	6	13	Normal
6-Jun-07	3.40	3	3.91	4	2.52	3	10	Normal
27-May-10	0.29	1	2.92	4	6.12	9	14	Normal
19-Jun-12	1.82	2	3.13	4	1.57	3	9	Dry
13-Jun-14	1.31	1	2.72	2	5.46	9	12	Normal
2-Jun-15	1.28	1	3.14	4	5.18	6	11	Normal
13-Jun-15	1.28	1	3.14	4	5.18	6	11	Normal
7-Jun-20	3.69	3	5.06	6	8.90	9	18	Wet
6-Jun-23	2.82	3	4.24	4	1.46	3	10	Normal
30% chance less than**	1.37		2.80		3.36			
30 Year Average**	2.26		3.83		4.44			
30% chance more than**	2.74		4.51		5.18			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

July Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	April	Weighted Precip	May	Weighted Precip	June	Weighted Precip		
06/30/05	2.62	1	2.51	2	0.46	3	6	Dry
07/01/06	3.41	2	4.76	4	4.39	6	12	Normal
07/07/07	3.91	2	2.52	2	2.93	3	7	Dry
06/23/10	2.92	2	6.12	6	4.21	6	14	Normal
07/01/10	2.92	2	6.12	6	4.21	6	14	Normal
06/26/16	3.04	2	6.49	6	3.86	6	14	Normal
07/06/18	2.06	1	9.79	6	9.21	9	16	Wet
30% chance less than**	2.80		3.36		3.13			
30 Year Average**	3.83		4.44		4.46			
30% chance more than**	4.51		5.18		5.29			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

August Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	May	Weighted Precip	June	Weighted Precip	July	Weighted Precip		
08/06/04	8.60	3	4.11	4	2.51	3	10	**Normal**
08/06/05	2.51	1	0.46	2	1.39	3	6	**Dry**
08/02/09	4.18	2	6.17	6	2.44	3	11	**Normal**
08/06/11	8.22	3	4.45	4	5.76	9	16	**Wet**
07/24/22	5.73	3	2.74	2	9.30	9	14	**Normal**
08/16/23	1.46	1	2.46	2	8.43	9	12	**Normal**
30% chance less than**	3.36		3.13		2.69			
30 Year Average**	4.44		4.46		4.13			
30% chance more than**	5.18		5.29		4.96			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

September Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	June	Weighted Precip	July	Weighted Precip	August	Weighted Precip		
9/14/11	4.45	2	5.76	6	6.27	9	17	**Wet**
9/16/15	8.35	3	5.74	6	3.10	6	15	**Wet**
9/1/17	5.45	3	9.69	6	2.14	3	12	**Normal**
9/14/19	3.74	2	3.30	4	3.23	6	12	**Normal**
9/5/21	5.68	3	1.09	2	3.94	6	11	**Normal**
30% chance less than**	3.13		2.69		2.96			
30 Year Average**	4.46		4.13		4.51			
30% chance more than**	5.29		4.96		5.41			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

October Aerial Imagery

Off-Site Aerial Imagery Analysis

Date	Monthly Rainfall in Inches [1]						Weighted Sum	Relative Wetness
	July	Weighted Precip	August	Weighted Precip	September	Weighted Precip		
10-Oct-07	5.91	3	15.69	6	0.77	3	12	**Normal**
		1		2		3	6	**Dry**
30% chance less than**	2.69		2.96		1.98			
30 Year Average**	4.13		4.51		3.44			
30% chance more than**	4.96		5.41		4.19			

WETS Station: Elgin Water, IL
30-Year Precipitation Data (1994-2023) from NOAA Website
http://agacis.rcc-acis.org/

WETS Table

WETS Station: ELGIN WATER, IL								
Requested years: 1994 - 2023								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	30.1	14.2	22.1	1.85	1.20	2.22	5	10.4
Feb	33.8	16.1	24.9	1.83	1.00	2.23	5	8.6
Mar	46.3	26.5	36.4	2.26	1.37	2.74	5	3.1
Apr	58.6	36.8	47.7	3.83	2.80	4.51	8	0.7
May	70.1	48.2	59.1	5.16	3.54	6.14	9	0.0
Jun	80.3	58.6	69.5	4.46	3.13	5.29	7	0.0
Jul	84.2	63.4	73.8	4.13	2.69	4.96	6	0.0
Aug	82.4	61.6	72.0	4.51	2.96	5.41	6	0.0
Sep	76.2	53.3	64.8	3.44	1.98	4.19	6	0.0
Oct	62.9	41.5	52.2	3.37	2.06	4.09	6	0.0
Nov	48.0	30.2	39.1	2.36	1.46	2.86	5	1.4
Dec	35.8	20.5	28.2	2.22	1.57	2.64	5	7.0
Annual:					36.05	43.99		
Average	59.1	39.2	49.1	-	-	-	-	-
Total	-	-	-	39.42			73	31.3

GROWING SEASON DATES			
Years with missing data:	24 deg = 1	28 deg = 1	32 deg = 0
Years with no occurrence:	24 deg = 0	28 deg = 0	32 deg = 0
Data years used:	24 deg = 29	28 deg = 29	32 deg = 30
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	4/1 to 11/12: 225 days	4/14 to 10/27: 196 days	4/28 to 10/18: 173 days
70 percent *	3/28 to 11/16: 233 days	4/9 to 11/1: 206 days	4/25 to 10/22: 180 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1983			M0.00	6.76	3.47	2.10	3.55	3.26	6.19	M3.74	5.19	M1.64	35.90
1984	M0.51	1.42	M0.27	M4.49								M1.83	8.52
1985		M1.37	3.74	1.45	3.74	3.08	5.70	4.07	2.54	3.75	8.42	M0.76	38.62
1986	M0.31	M1.72	M0.20	2.30	4.98	4.24	4.41	1.67	7.08		1.36	0.97	29.24
1987		0.04	M1.42	3.51	M4.52	M1.68	3.52	11.36	2.54	1.18	M4.04	M2.98	36.79
1988	2.16	M1.02	M1.94	3.18	1.15	1.36	2.57	5.69	2.31	2.65	4.20	M3.01	31.24
1989	M0.50	M0.84	0.66	1.01		4.38	6.65	M6.26	4.39	1.06	2.31	M0.29	28.35
1990	M2.42	1.81	2.31	2.01	4.70	4.98	2.82	6.44	1.02	3.31	4.34	1.69	37.85
1991	M0.73	0.24	2.28	4.13	5.02	1.59		2.68	3.	5.	3.61	1.54	30.

									11	84			77
1992	0.92	1.41	M3.81	2.75	0.47	1.02	5.42	2.67	4.02	1.13	5.69	2.92	32.23
1993	3.38	1.08	2.53	7.16	2.07	10.40	5.32	3.30	3.44	1.49	1.97	1.69	43.83
1994	M1.41	M1.35	1.11	1.84	1.47	4.19	3.68	5.45	2.00	1.16	6.20	1.18	31.04
1995	M3.27	0.08	2.40	5.82	5.35	1.71	4.62	5.18	1.90	5.11	4.14	M0.65	40.23
1996	M1.10	1.02	0.67	2.43	8.70	5.51	3.82	5.68	2.27	2.02	M1.37	1.71	36.30
1997	M0.60	M5.62	2.04	1.64	5.57	2.80	1.52	M4.73	1.98	2.26	M1.33	M1.29	31.38
1998	3.64	1.56	2.17	5.07	3.81	5.27	1.82	4.46	3.11	6.27	1.94	1.80	40.92
1999	M3.04	1.44	M0.23	8.53	3.38	M6.51	3.68	1.80	5.01	1.31	0.63	2.30	37.86
2000	M1.03	M0.91	1.60	4.36	4.50	6.16	4.42	3.22	5.71	1.74	4.65	2.54	40.84
2001	1.43	2.73	1.18	3.42	4.24	3.86	1.19	4.13	6.00	7.53	1.93	1.49	39.13
2002	1.51	M1.26	2.24	3.66	4.89	5.56	1.54	10.21	1.89	1.92	0.93	1.20	36.81
2003	0.37	0.20	1.49	2.35	8.46	1.58	3.53	2.07	1.80	1.92	5.46	2.85	32.08
2004	0.68	0.87	4.97	1.73	8.60	4.11	2.51	3.98	0.72	2.66	3.09	2.48	36.40
2005	M3.03	1.71	0.94	2.62	2.51	0.46	1.39	3.71	2.01	0.78	2.71	1.00	22.87
2006	3.12	1.29	3.64	3.41	4.76	4.39	3.75	3.30	4.28	4.46	2.78	2.97	42.15
2007	1.75	1.89	3.40	3.91	2.52	2.93	5.91	15.69	0.77	3.28	1.01	3.20	46.26
2008	1.92	3.92	1.89	4.53	3.84	4.45	4.31	3.74	11.48	2.41	1.17	5.22	48.88
2009	1.17	2.45	5.08	5.31	4.18	6.17	2.44	6.57	0.70	5.85	1.69	3.78	45.39
2010	1.20	1.29	M0.29	M2.92	6.12	4.21	8.98	2.84	4.05	M0.58	M1.21	M1.43	35.12
2011	M1.21	3.27	2.73	M5.62	8.22	M4.45	M5.76	M6.27	M4.49	M1.76	M4.14	M3.08	51.00
2012	1.42	M0.76	1.82	3.13	1.57	2.66	2.75	2.81	2.09	4.03	0.69	2.77	26.50
2013	3.51	3.01	2.19	7.42	2.96	3.86	3.00	2.70	4.02	1.79	3.17	M1.14	38.77
2014	2.18	1.81	1.31	2.72	M5.46	5.89	4.02	6.77	3.30	2.97	1.39	1.19	39.01
2015	1.56	1.45	1.28	3.14	5.18	M8.35	5.74	3.10	5.48	1.39	4.81	M5.50	46.98
2016	M0.34	1.14	3.30	3.04	6.49	3.86	4.59	3.58	2.24	3.58	2.38	1.85	36.39
2017	M2.83	0.90	4.94	4.57	5.48	5.45	9.69	2.14	0.58	7.78	1.92	0.90	47.18
2018	1.28	4.67	1.51	2.06	9.79	9.21	2.77	5.81	3.84	5.44	M3.20	2.06	51.64
2019	2.97	M3.41	2.32	4.69	8.76	3.74	3.30	3.23	8.89	5.90	1.95	2.02	51.18
2020	2.76	0.68	3.69	5.06	8.90	5.44	4.21	0.70	5.47	3.42	M2.11	M2.01	44.45
2021	1.78	1.07	1.28	1.13	1.76	5.68	1.09	3.94	1.48	M7.02	0.83	M2.36	29.42
2022	M0.62	M2.30	3.28	M3.67	5.73	2.74	9.30	5.76	2.43	M1.81	1.01	2.17	40.82
2023	2.67	4.20	2.82	4.24	1.46	2.46	8.43	1.66	3.27	3.07	1.04	2.60	37.92
2024	3.49	M0.93	M1.73										6.15

Notes: Data missing in any month have an "M" flag. A "T"