
French Lake Road Site

Dayton, Hennepin County, Minnesota

Wetland Delineation Report

Prepared for

Master Real Estate 2, LLC

by

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(KES Project No. 2020-054)

July 17, 2020

French Lake Road Site

Dayton, Hennepin County, Minnesota

Wetland Delineation Report

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French Lake Road Site

Dayton, Hennepin County, Minnesota

Wetland Delineation Report

1. WETLAND DELINEATION SUMMARY

- The 44.56-acre French Lake Road site was inspected on June 11, 2020 for the presence and extent of wetland.
- The National Wetlands Inventory (NWI) map showed three PEM1C wetlands and one PEM1Ad wetland within the site boundaries.
- The soil survey showed hydric soil types on the property which included Cordova, Glencoe, and Klossner soils.
- The DNR Public Waters Inventory showed French Lake (DNR Public Water 27-127P) located approximately 150 feet northeast of the property.
- The National Hydrography Dataset did not show a waterbody or watercourse within the property boundaries.
- Eight wetlands that were delineated within the site boundaries are summarized below.

Table 1. Wetlands delineated on the French Lake Road site

Wetland ID	Wetland Type			Dominant Vegetation
	Circular 39	Cowardin	Eggers and Reed	
1	2/3	PEM1B/Cd	Wet meadow/Shallow marsh	Reed canary grass, cattail
2	2	PEM1Bf	Wet meadow	Cattail
3	1	PEM1A	Seasonally flooded basin	Reed canary grass
4	1/2	PEM1A/Bf	Seasonally flooded basin/Wet meadow	Reed canary grass, green ash
5	1	PEM1Af	Seasonally flooded basin	
6	1/2	PEM1Af/ PFO1A	Seasonally flooded basin/Wooded swamp	Reed canary grass, black willow, green ash
7	2	PEM1B	Fresh wet meadow	Reed canary grass, jewelweed, cattail
8	2/3/6	PEM1Bf/C/ PSS1B	Fresh meadow/Shrub swamp	Cattail, black willow, green ash, reed canary grass

2. OVERVIEW

The 44.56-acre French Lake Road site was inspected on June 11, 2020 for the presence and extent of wetland. The property was located in the Southern ½ of Section 30, Township 120 North, Range 22 West, City of Dayton, Hennepin County, Minnesota. The site was situated south of French Lake Road West and north of County Road 81 (**Figure 1**). The property corresponded to Hennepin County PID 3012022340001.

The site consisted of annually tilled cropland that was planted with corn for the 2020 growing season. The topography sloped from an elevation of 944 feet msl in the western portion of the site down to a low of 910 feet msl in the eastern part of the site. The property drained overland toward the northeast.

The property was bordered on the west by Dayton Park Properties, on the south by commercial business and cropland, on the east by rural residential lots, and on the north by French Lake Road and woodland.

Eight wetlands were delineated within the site boundaries. The delineated wetland boundaries and existing conditions are shown on **Figure 2**.

Appendix A of this report includes a Joint Application Form for Activities Affecting Water Resources in Minnesota, which is submitted in request for: (1) a wetland boundary and type determination under the Minnesota Wetland Conservation Act (WCA), and (2) delineation concurrence under Section 404 of the Federal Clean Water Act.

3. METHODS

3.1 Wetland Delineation

Wetlands were identified using the Routine Determination method described in the [Corps of Engineers Wetlands Delineation Manual](#) (Waterways Experiment Station, 1987) and the [Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region](#) (Version 2.0) as required under Section 404 of the Clean Water Act and the Minnesota Wetland Conservation Act.

Wetland boundaries were identified as the upper-most extent of wetland that met criteria for hydric soils, hydrophytic vegetation, and wetland hydrology. Wetland-upland boundaries were marked with pin flags that were located by land surveyors from Demarc Land Surveying & Engineering.

Soils, vegetation, and hydrology were documented at a representative location along the wetland-upland boundary. Plant species dominance was estimated based on the percent aerial or basal coverage visually estimated within a 30-foot radius for trees and vines, a 15-foot radius for the shrub layer, and a 5-foot radius for the herbaceous layer within the community type sampled.

Soils were characterized to a minimum depth of 24 inches (unless otherwise noted) using a [Munsell Soil Color Book](#) and standard soil texturing methodology. Hydric soil indicators used are from [Field Indicators of Hydric Soils in the United States](#) (USDA Natural Resources Conservation Service (NRCS) in cooperation with the National Technical Committee for Hydric Soils, Version 8.1, 2017).

Mapped soils are separated into five classes based on the composition of hydric components and the Hydric Rating by Map Unit color classes utilized on [Web Soil Survey](#). The five classes include Hydric (100 percent hydric components), Predominantly Hydric (66 to 99 percent hydric components), Partially Hydric (33 to 65 percent hydric components), Predominantly Non-Hydric (1 to 32 percent hydric components), and Non-Hydric (less than one percent hydric components).

Plants were identified using standard regional plant keys. Taxonomy and indicator status of plant species was taken from the [2016 National Wetland Plant List](#) (U.S. Army Corps of Engineers 2016. National Wetland Plant List, version 3.3, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH).

3.2 Aerial Review for Offsite Hydrology Determinations

Areas in agricultural cropland that exhibited potential wetland signatures on aerial photography and with low or depressional topography were reviewed generally following methods described in [Guidance for Offsite Hydrology/Wetland Determination](#) (Minnesota Board of Water and Soil Resources (BWSR) and USACE 2017) and [Guidance for Submittal of Delineation Reports to the St. Paul District Corps of Engineers and Wetland Conservation Act Local Governmental Units in Minnesota, Version 2.0](#) (USACE 2015). These methods use aerial photography and antecedent precipitation conditions to identify areas that have wetland hydrology signatures during periods of typical precipitation.

Available years of [Farm Service Agency](#) (FSA) aerial photography were reviewed for the site to determine long-term hydrology. In cases where additional aerial photography was relevant, available, and necessary to make hydrology determinations, we reviewed aerial photography from other sources such as the [Minnesota Geospatial Information Office](#) (MnGEO) and [Google Earth](#).

Signatures at locations of potential wetlands on aerial photographs were interpreted and classified using seven codes (**Table 2**). Wetland hydrology was assumed to be present within areas exhibiting wetland signatures in more than 50% of years with normal climatic conditions based on antecedent precipitation.

Table 2. Aerial photograph interpretation codes

Code	Classification
CS	Crop stress
DO	Drowned out
NC	Not cropped
SW	Standing water
WS	Wetland signature

Table 2. Aerial photograph interpretation codes

Code	Classification
AP	Altered pattern
NV	Normal vegetation

This analysis used only aerial photographs taken following periods of precipitation within the normal range as determined using the [Wetland Delineation Precipitation Data Retrieval](#) tool (Minnesota Climatology Office 2015). This tool classifies antecedent precipitation as Normal (N), Wet (W) or Dry (D) by comparing precipitation during the three months preceding the estimated date of aerial photography to the 30-year average from 1981-2010. July 1 was used as the estimated date of FSA aerial photography.

4. RESULTS

4.1 Review of NWI, Soils, Public Waters and NHD Information

The [National Wetlands Inventory \(NWI\)](#) (Minnesota Geospatial Commons 2009-2014 and [U.S. Fish and Wildlife Service](#)) showed three PEM1C wetlands and one PEM1Ad wetland within the site boundaries (**Figure 3**).

The [Soil Survey](#) (USDA NRCS 2015) showed that hydric soil types on and near the property included Cordova, Glencoe, and Klossner soils. Predominantly non-hydric soils included Lester, Nessel, Dundas-Cordova complex, and Le Sueur soils. Soil types mapped on the property are listed in **Table 3** and a map showing soil types is included in **Figure 4**.

Table 3. Soil types mapped on the French Lake Road site

Symbol	Soil Name	Acres	% of Area	% Hydric	Hydric Category
L22C2	Lester loam, 6 to 10 percent slopes, moderately eroded	6.5	15.3%	2	Predominantly non-hydric
L22D2	Lester loam, 10 to 16 percent slopes, moderately eroded	0.01	0.0%	0	Non-hydric
L23A	Cordova loam, 0 to 2 percent slopes	4.4	10.3%	95	Predominantly hydric
L24A	Glencoe clay loam, 0 to 1 percent slopes	0.4	0.9%	100	Hydric
L25A	Le Sueur loam, 1 to 3 percent slopes	1.3	3.0%	15	Predominantly non-hydric
L35A	Lerdal loam, 1 to 3 percent slopes	1.9	4.5%	15	Predominantly non-hydric
L44A	Nessel loam, 1 to 3 percent slopes	6.9	16.2%	10	Predominately Non-hydric
L45A	Dundas-Cordova complex, 0 to 3 percent slopes	18.9	44.4%	30	Predominantly non-hydric
L49A	Klossner soils, depressional, 0 to 1 percent slopes	2.3	5.4	100	Hydric

The [Minnesota DNR Public Waters Inventory](#) (Minnesota Department of Natural Resources 2015) showed French Lake (DNR Public Waters 27-127P) located approximately 150 northeast of the property boundaries (**Figure 5**).

The [National Hydrography Dataset](#) (U.S. Geological Survey 2015) did not show any waterbodies or watercourses within the property boundaries (**Figure 6**).

4.2 Wetland Determinations and Delineations

Potential wetlands were evaluated during field observations on June 11, 2020. Eight wetlands were identified and delineated on the property (**Figure 2**). Corresponding data forms are included in **Appendix B**. The following descriptions of the wetlands and adjacent uplands reflects conditions observed at the time of the field visit. Herbaceous vegetation and crops were actively growing at the time of the wetland delineation. Precipitation conditions were wetter than the normal range based on available 30-day rolling total precipitation method and within the normal range based on the three-month antecedent precipitation data method (**Appendix C**). A wetland boundary survey prepared by Demarc Land Surveying & Engineering is included as **Appendix E**.

Wetland 1 was a ditched Type 2/3 (PEMB/Cd) wet meadow/shallow marsh wetland located in eastern portion of the property. The wetland fringe consisted of reed canary grass. The central part of the wetland was dominated by cattails with scattered soft-stem bulrush, sedges, and northern water plantain. Inundation up to 6 inches was observed in the central portion of the wetland. This wetland covered 3 acres within the property boundaries.

Adjacent upland consisted of row crops dominated by healthy corn along the western wetland boundary and smooth brome, Kentucky bluegrass, and common milkweed along the eastern wetland boundary. Primary and secondary hydrology indicators were not observed on the upland.

The wetland boundary corresponded to a topographic rise that coincided with a transition from reed canary grass to healthy corn with a FACU plant community. The wetland was shown on the NWI map as a PEM1Ad and area mapped as predominantly hydric soil (Klossner, Cordova) on the soil survey. The wetland was ditched within the northern half to collect excess water with not readily visible natural or constructed outlets observed within wetland 1. Aerial review verified delineated farmed wetland boundaries for consistency with the boundaries in the majority of normal precipitation years.

Wetland 2 was a Type 2 (PEM1Bf) farmed wet meadow wetland located in the northeastern part of the property. The wet meadow was dominated by a drown-out area of corn with scattered cattails. Saturation and inundation were not observed in the wetland, but multiple secondary indicators of wetland hydrology were observed within the wetland. This wetland covered 0.08 acres within the property boundaries.

Adjacent upland was dominated by healthy planted corn. Primary and secondary hydrology indicators were not observed on the upland.

The wetland edge followed a shallow increase in the slope accompanied by a transition from drowned-out corn to healthy corn. The wetland was not shown on the NWI map and was mapped as predominantly non-hydric soil (Lester loam) on the soil survey. Wetland 2 drained off-site into a reed canary grass dominated ditch to the northeast.

Wetland 3 was a Type 1 (PEM1A) seasonally flooded basin wetland. The wetland was dominated by reed canary grass and scattered stinging nettles within the road ditch. Inundation up to ½ inch was observed within the wetland and the area drained through a culvert under French Lake Road to the northeast. The wetland covered 0.07 acres within the property boundaries.

The adjoining upland consisted of drowned-out corn that was reviewed off-site for hydrology as described in **Section 4.4**.

The wetland boundary corresponded to the road ditch. The wetland was not shown on the NWI map but fell within an area mapped as predominantly hydric Cordova loam on the soil survey.

Wetland 4 was a farmed Type 1/2 (PEM1A/Bf) seasonally flooded basin/ wet meadow dominated by reed canary grass with scattered northern water plantain, soft-stem bulrush, and sedges. The northern portion of the wetland consisted of drowned-out corn field. Inundation up to 6 inches was observed along the southern property boundary. This wetland covered 0.84 acres within the property boundaries.

The adjacent upland was planted corn and woodland dominated by common buckthorn, and basswood trees. Primary and secondary hydrology indicators were not observed on the upland.

The delineated boundary followed a change in vegetation composition from reed canary grass to a basswood forest with an understory of common buckthorn shrubs. This change corresponded to a shift to an upland landscape position and an area that lacked wetland signatures on aerial photos. Wetland 4 corresponded to a PEM1A wetland on the NWI map and was located in an area mapped as predominately non-hydric soil (Dundas-Cordova complex) on the soil survey. This wetland drains overland to the north into erosion control swales and then to Wetland 3.

Wetland 5 was a Type 1 (PEM1Af) seasonally flooded basin wetland dominated by a drowned-out area in the corn field. Inundation and saturation were not observed within the wetland, but sediment deposits and surface soil cracks were observed. This wetland covered 0.07 acres within the property boundary.

The adjacent upland was cropland dominated by planted corn. No wetland hydrology indicators or moisture-related crop stress was observed on the adjacent upland.

The delineated boundary followed a transition from drowned out corn field in a depressional basin to a healthy corn field. Wetland 5 did not correspond to a wetland on the NWI map and was located in an area mapped as predominantly non-hydric Dundas-Cordova complex on the

soil survey. Wetland 5 drains to the north overland into an erosion control swale and then to Wetland 3.

Wetland 6 was a farmed Type 1/2 (PEM1Af/PFO1A) seasonally flooded basin/wooded swamp dominated by reed canary grass, green ash trees, willows, silver maple trees, and cottonwoods with scattered sedges, sensitive fern, gooseberry, and rushes. The southern portion of the wetland consisted of drowned-out corn field. Inundation up to 6 inches was observed in the center of the wetland. This wetland covered 0.76 acres within the property boundaries.

The adjacent upland was planted corn. Primary and secondary hydrology indicators were not observed on the upland.

The delineated boundary followed a change in vegetation composition from stunted corn to healthy corn. This change corresponded to a shift to an upland landscape position and an area that lacked wetland signatures on aerial photos. Wetland 6 corresponded to a PEM1A wetland on the NWI map and was located in an area mapped as predominately hydric soil (Cordova) on the soil survey. This wetland drained to the north off-site. Aerial review verified delineated farmed wetland boundaries for consistency with the boundaries in the majority of normal precipitation years.

Wetland 7 was a farmed Type 2 (PEM1Bf) wet meadow dominated by cattails and horsetails. The northern portion of the wetland consisted of drowned-out corn field. Saturation was observed throughout the wetland. This wetland covered 0.01 acres within the property boundaries.

The adjacent upland was dominated by planted corn to the north and common buckthorn to the south. Primary and secondary hydrology indicators were not observed on the upland.

The delineated boundary followed a change in vegetation composition from stunted corn to healthy corn. This change corresponded to a shift to an upland landscape position and an area that lacked wetland signatures on aerial photos. Wetland 7 did not correspond to a wetland on the NWI map and was located in an area mapped as predominately non-hydric soil (Lerdal) on the soil survey. This wetland was isolated with no apparent outlet observed. Three attempted sample points within the wetland were restricted at 24 inches from the soil surface due to a possible rock or infrastructure.

Wetland 8 was a farmed Type 2/3/6 (PEM1Bf/C/PSS1B) wet meadow/shrub swamp dominated by cattails, reed canary grass, willows, boxelder trees, and green ash trees with scattered rushes, giant goldenrod, and smartweed. The northern portion of the wetland consisted of drowned-out corn field. Inundation up to 6 inches was observed in the center of the wetland along the southern property boundary. This wetland covered 1.49 acres within the property boundaries.

The adjacent upland was dominated by healthy planted corn. Primary and secondary hydrology indicators were not observed on the upland.

The delineated boundary followed a change in vegetation composition from reed canary grass and giant goldenrod to healthy corn. This change corresponded to a shift to an upland landscape position and an area that lacked wetland signatures on aerial photos. Wetland 8 corresponded to a PEM1A wetland on the NWI map and was located in an area mapped as predominately hydric soil (Cordova) on the soil survey. This wetland extended to the south off-site. Aerial review verified delineated farmed wetland boundaries for consistency with the boundaries in the majority of normal precipitation years.

4.3 Other Areas

Other areas were investigated because they were: (1) observed to support a hydrophytic plant community, (2) had visible wetland hydrology indicators, (3) were shown as wetland on the NWI map, or (4) were depressional and mapped as hydric soil. Field investigation led to the conclusion that these areas were not wetland. Datasheets documenting conditions within these areas are found in **Appendix B**.

Sample Point X was a swale located in the northwestern portion of the site that was not shown as wetland on the NWI map and was mapped as Lester loam soils (predominately non-hydric) on the soil survey. This area was dominated by a stunted corn. Soils at the sample point were non-hydric and consisted of dark loam over 10YR3/2 soils. The area lacked primary indicators of wetland hydrology and was reviewed off-site (Area F) for hydrology determination, which only found 14 percent of the years sampled with wetland signatures.

Erosion control swales were located within the northern portion of the farm field. Portions of the swales were eroded into trenches with steep topography. The area was not shown as wetland on the NWI map and was shown as Nessel and Lester (predominately non-hydric) on the soil survey. The plant community was dominated by reed canary grass, willows, boxelder trees with ground ivy, Canada thistle, and smooth brome. The area was determined to be non-wetland based on the lack of primary and secondary wetland hydrology indicators.

4.4 Aerial Review for Offsite Hydrology Determinations

Aerial photography was utilized from the Hennepin County, FSA, Google Earth, USGS, Met Council, and Kjolhaug Environmental Services drone flight between 2006 and 2020. Years 2006, 2008, 2015, 2016, 2017, 2018, and 2020 were assessed for wet/normal/dry climatic conditions using the [Wetland Delineation Precipitation Data Retrieval](#) tool and an estimated photo date of July 1 for the FSA aerials. Seven years (2006, 2008, 2015, 2016, 2017, 2018, and 2020) were determined have precipitation in the normal range during the three months preceding the estimated photo dates. Areas showing at least one wetland signature during the selected years were included in the aerial review. The results are summarized in **Table 4** and review areas are shown on **Figure 7**. Aerial photographs showing review areas and interpretations are included in **Appendix D**. Aerial review verified delineated farmed wetland boundaries for consistency with the boundaries in the majority of normal precipitation years.

All areas exhibited potential wetland signatures, were located in agricultural cropland, and were reviewed according to the [BWSR \(2010\) protocol](#). Areas exhibiting wetland signatures in more

than 50% of the years with precipitation in the normal range are generally assumed to meet wetland hydrology criteria. Areas exhibiting wetland signatures in 30% to 50% of the years with precipitation in the normal range were also reviewed in the field (**Table 4, Figures 2 and 7**).

Table 4. Offsite hydrology determinations

Area	No. of Photo Years w/ Normal Precipitation	No. of Normal Precipitation Years w/ Wetland Signatures	% of Normal Precipitation Years w/ Wetland Signatures	Hydrology Determination
A	7	5	71	Wetland 5
B	7	7	100	Wetland 4
C	7	1	14	No
D	7	5	71	Wetland 2

Area A and B both showed wetland signatures in a majority of the normal precipitation years, showing wetland hydrology signatures (71% and 100% occurrence respectively). Area A showed signatures near the northern portion of the review area where a sample was acquired in the field (SP5-1) and was delineated based on the location where the signatures occurred most frequently. Area B was delineated in the field at the extent of the drowned-out/stunted corn and a sample point was obtained within this area (SP4-1). Area E's delineated wetland boundary corresponded to the extent of wetland signatures observed during the majority of normal years. Both areas were determined to be wetland based on: (1) wetland signatures during a majority of years with precipitation in the normal range, and (2) secondary wetland hydrology indicators observed in the field.

Areas C failed to show sufficient wetland hydrology signatures (14% occurrence) and were determined to be non-wetland based a lack of wetland signatures during a majority of years with precipitation in the normal range.

Area D was located adjacent to the northeast project boundary and showed wetland hydrology signatures 71% occurrence during normal years reviewed. The soil at the sample point (SP2-1W) was deep dark clay loam and was assumed to be hydric. No primary indicators of wetland hydrology were observed. Area D was determined to be wetland based on multiple secondary wetland hydrology indicators.

No other areas with hydrophytic vegetation or wetland hydrology were observed on the site. No other areas were shown as hydric soil on the soil survey or as wetland on the NWI map.

4.5 Request for Wetland Boundary and Jurisdictional Determination

Appendix A of this report includes a Joint Application Form for Activities Affecting Water Resources in Minnesota, which is submitted in request for: (1) a wetland boundary and type determination under the Minnesota Wetland Conservation Act (WCA), and (2) delineation concurrence and an Approved Jurisdictional Determination (AJD) under Section 404 of the Federal Clean Water Act.

5. CERTIFICATION OF DELINEATION

The procedures utilized in the described delineation are based on the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual as required under Section 404 of the Clean Water Act and the Minnesota Wetland Conservation Act. This wetland delineation and report were prepared in compliance with the regulatory standards in place at the time the work was performed.

Site boundaries indicated on figures within this report are approximate and do not constitute an official survey product.

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Minnesota Certified Wetland Delineator No. 1321

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French Lake Road Site

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FIGURES

1. Site Location
2. Existing Conditions
3. National Wetlands Inventory
4. Soil Survey
5. DNR Protected Waters Inventory
6. National Hydrography Dataset
7. Offsite Hydrology Assessment Areas

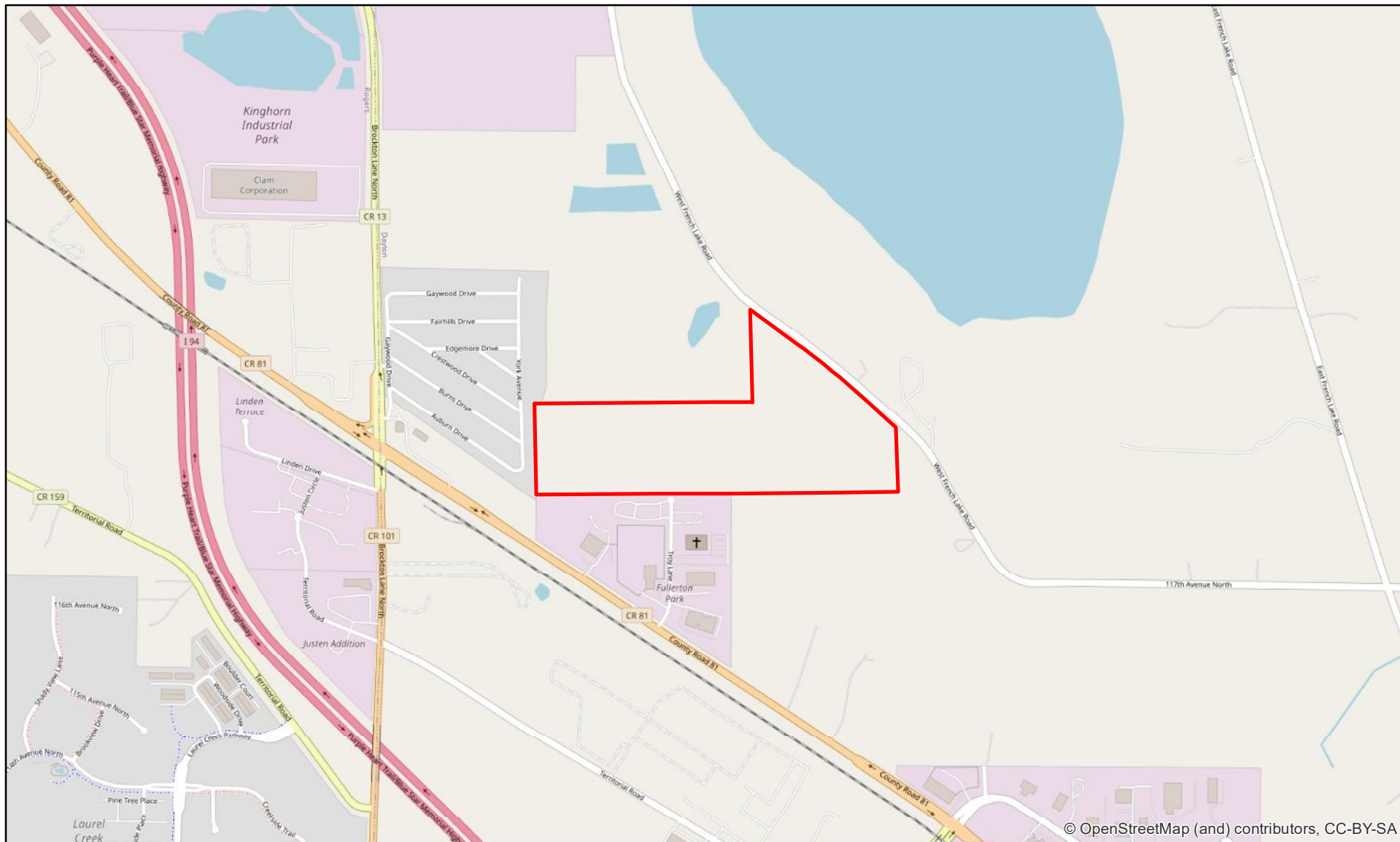
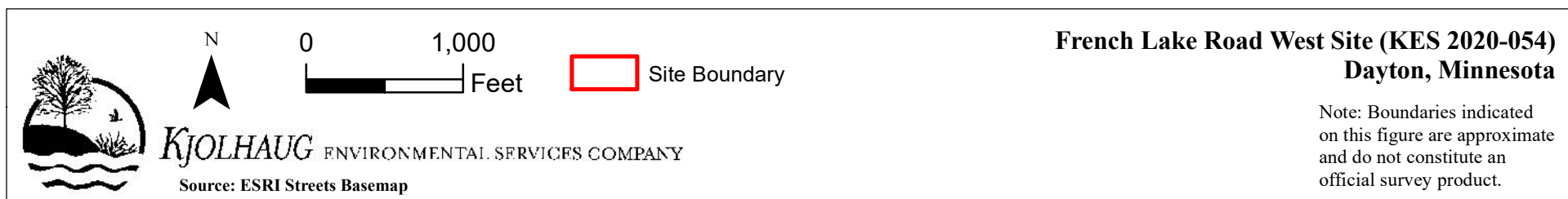


Figure 1 - Site Location Map



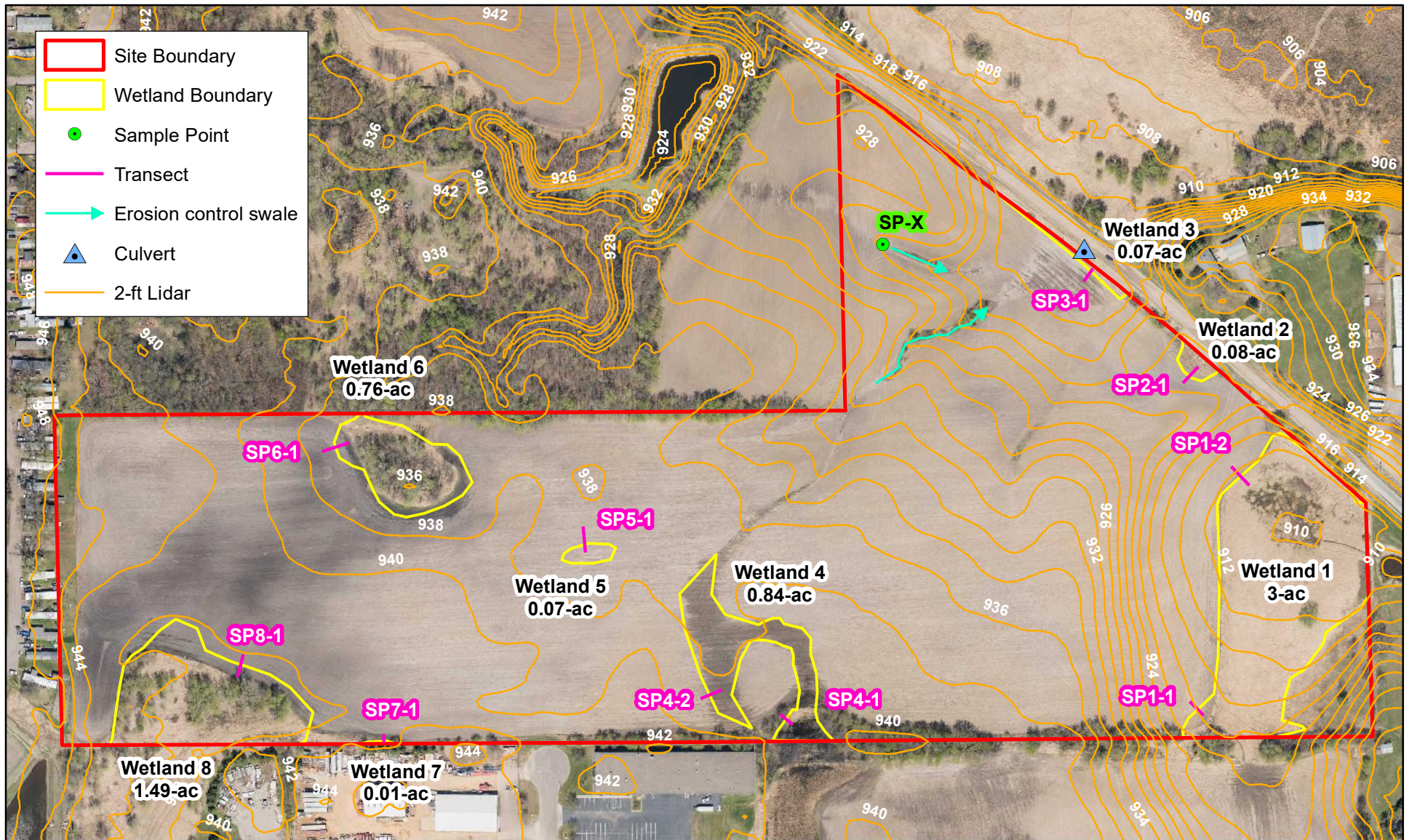


Figure 2 - Existing Conditions



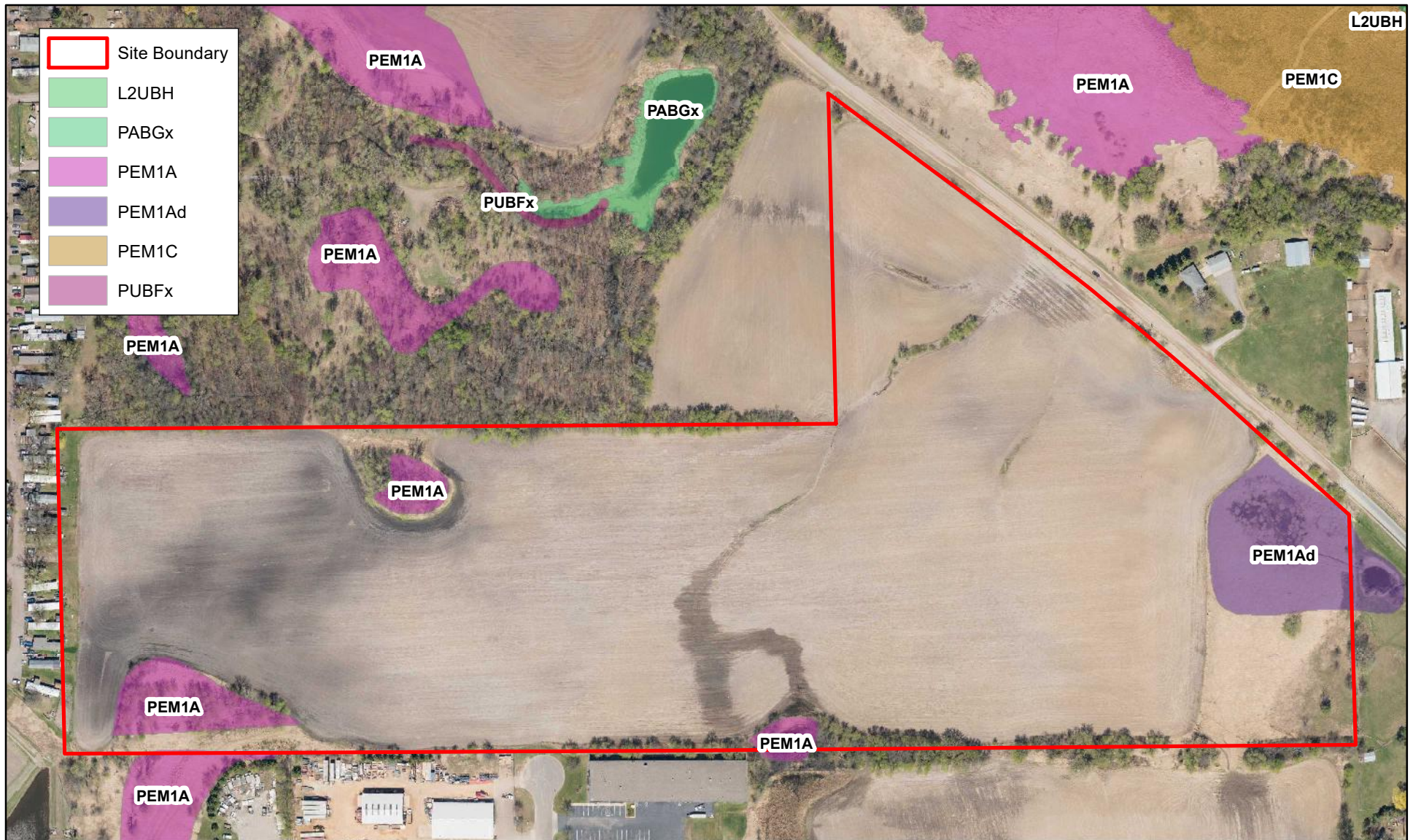


Figure 3 - National Wetlands Inventory



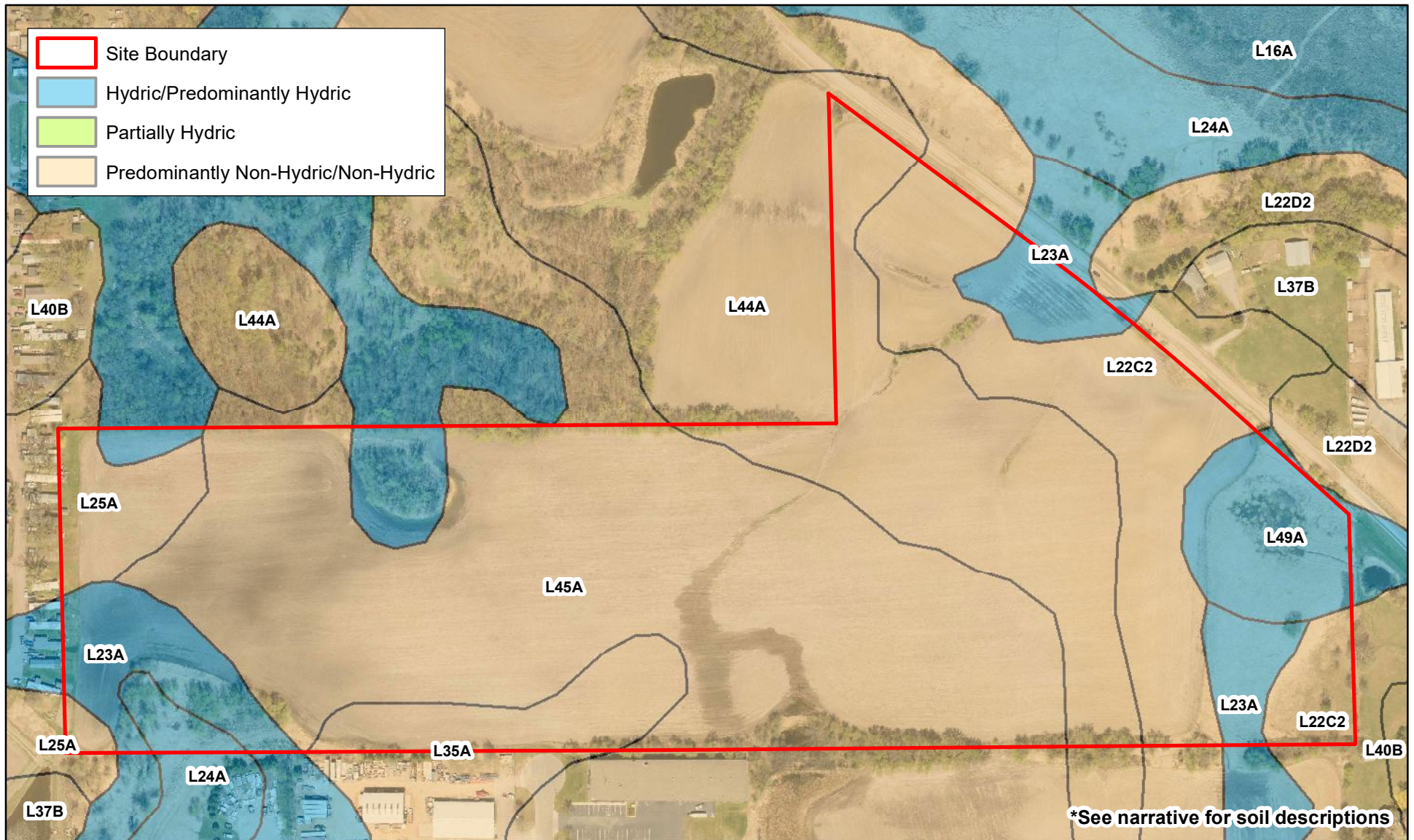


Figure 4 - Soil Survey



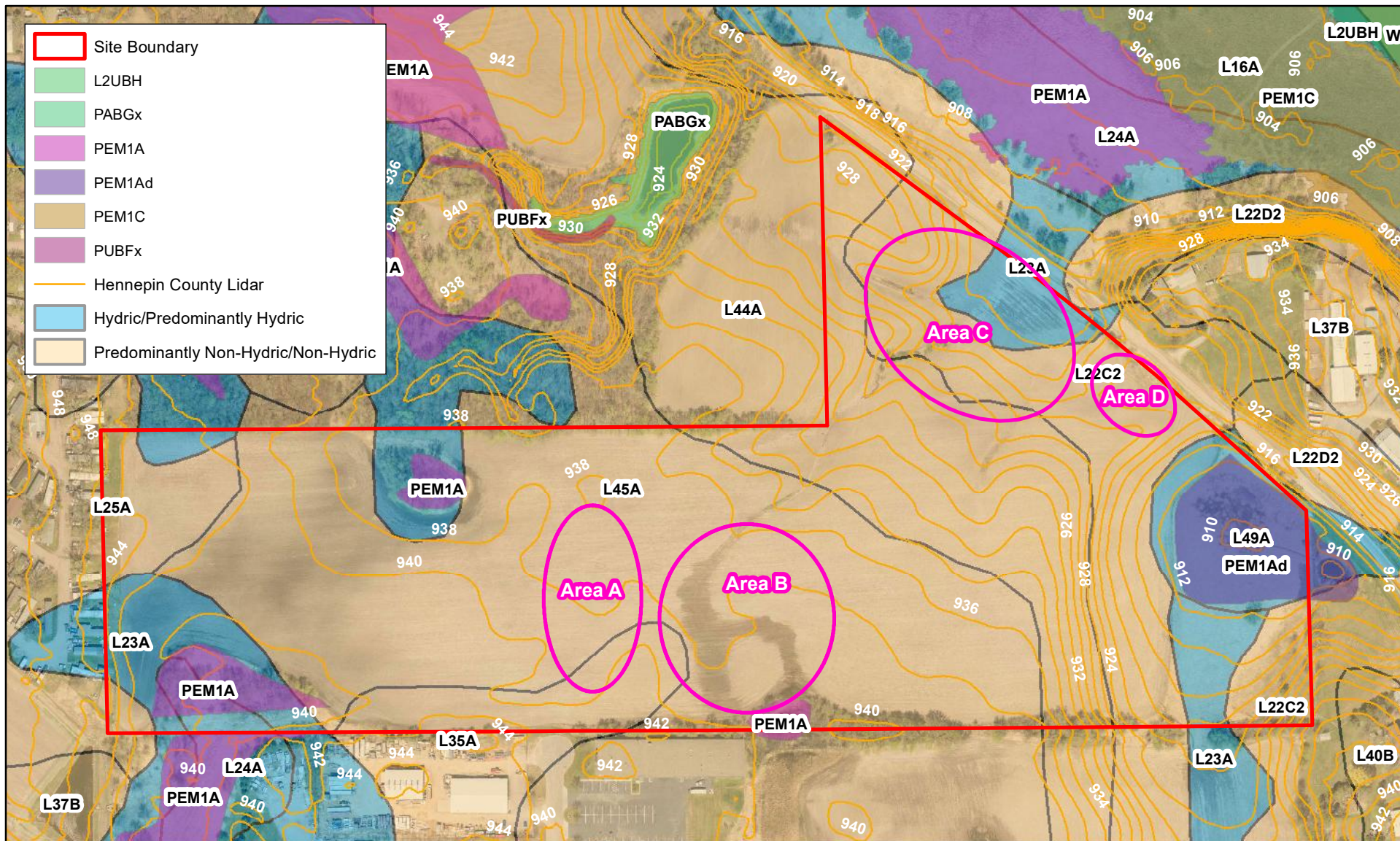
Figure 5 - DNR Public Waters Inventory





Figure 6 - National Hydrography Dataset





French Lake Road Site

Wetland Delineation Report

APPENDIX A

Joint Application Form for Activities Affecting Water Resources in Minnesota

Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at:

<http://www.mvp.usace.army.mil/Missions/Regulatory.aspx> and select "Minnesota" from the contact Information box.

Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (<https://webapps11.dnr.state.mn.us/mpars/public/authentication/login>).

Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

Project Name and/or Number: French Lake Road Site

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Master Real Estate 2 LLC
Mailing Address: 7211 Winnetka Ave N Brooklyn Park MN 55428
Phone: 763-464-2605
E-mail Address: Mmaster@Mtlcompanies.com

Authorized Contact (do not complete if same as above):

Mailing Address:
Phone:
E-mail Address:

Agent Name: Kyle Uhler
Mailing Address: 2500 Shadywood Road #130, Orono MN 55331
Phone: 952-401-8757 Ext. #103
E-mail Address: Kyle@kjolhaugenv.com

PART TWO: Site Location Information

County: Hennepin **City/Township:** Dayton
Parcel ID and/or Address: 3012022340001
Legal Description (Section, Township, Range): S:30 T:120N R:22W
Lat/Long (decimal degrees):
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): 44.56 ac

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted **prior to** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

Project Name and/or Number: French Lake Road Site

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:  Date: 
7/13/2020 10:55:18 AM CDT

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence.** Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination.** A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☒ **Approved Jurisdictional Determination.** An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>

French Lake Road Site

Wetland Delineation Report

APPENDIX B

Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP1-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear
 Slope (%): 2 to 4 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Lester loam VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal circumstances" present? No
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in active cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>10</u> x 5 = <u>50</u> Column totals <u>10</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>10</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP1-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-11	10YR3/2	100					Loam	
11-24	10YR2/1	98	10YR4/6	2	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): _____

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP1-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 1 to 3 Lat: Long: Datum:
 Soil Map Unit Name Lester loam VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 1</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP1-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-22	10YR2/1	90	10YR4/6	10	C	M	Clay loam	
22-31	10YR4/1	80	10YR4/1	10	C	M	Clay loam	
	10YR2/1	10						

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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 X Depth (inches):
 Water table present? Yes X No Depth (inches): 2
 Saturation present? Yes X No Depth (inches): 0
 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP1-2U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear
 Slope (%): 2 to 6 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Klossner soils VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal circumstances" present? No
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to the sample point in corn field

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column totals <u>15</u> (A) <u>75</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

Active corn field

SOIL

Sampling Point: SP1-2U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR5/2	100					Loam	
6-14	10YR2/1	98	10YR4/6	2	C	M	Clay loam	
14-27	N2.5/	100					Clay loam	
27-36	N2.5/	85	10YR4/6	15	C	M	Clay loam	
36-42	10YR4/1	98	10YR4/6	2	C	M	Sandy clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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 X Depth (inches):
 Water table present? Yes X No Depth (inches): 37
 Saturation present? Yes X No Depth (inches): 35
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP1-2W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name: Klossner soils VWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 1</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>20</u> x 1 = <u>20</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>120</u> (A) <u>220</u> (B) Prevalence Index = B/A = <u>1.83</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1	<u>Salix nigra</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
2					
3					
4					
5					
		<u>20</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP1-2W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-7	10YR2/1	90	10YR4/6	10	C	M	Clay loam	
7-24	10YR2/1	100					Peat	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 <u>X</u>	No <u> </u>	Depth (inches): <u>0</u>
Water table present?	Yes <u>X</u>	No <u> </u>	Depth (inches): <u>0</u>
Saturation present? (includes capillary fringe)	Yes <u>X</u>	No <u> </u>	Depth (inches): <u>0</u>

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP2-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 2 to 3 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lester loam VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal circumstances" present? No
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column totals <u>15</u> (A) <u>75</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP2-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-16	10YR2/1	100					Clay loam	
16-48	10YR3/1	90	10YR4/6	10	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

Assumed A12

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP2-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Lester loam NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 2</u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>5</u> (A) <u>5</u> (B) Prevalence Index = B/A = <u>1.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Typha angustifolia</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>5</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Stunted cattails in a drown out area

SOIL

Sampling Point: SP2-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-18	10YR2/1	100					Clay loam	
18-48	10YR3/1	90	10YR4/6	10	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

Assumed A12

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area D in offsite hydrology review

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP3-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat-concave
 Slope (%): 0 to 1 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Cordova NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal circumstances" present? No
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>10</u> x 5 = <u>50</u> Column totals <u>10</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>10</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

Active corn field

SOIL

Sampling Point: SP3-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR3/1	100					Loam	
6-14	10YR3/1	95	10YR4/6	5	C	M	Loam	
14-37	10YR2/1	85	10YR4/6	15	C	M	Clay loam	
37-46	10YR2/1	90	10YR4/6	10	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP3-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 2 Lat: Long: Datum:
 Soil Map Unit Name Corcova NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 3</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Sample in road ditch.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2					
3					
4					
5					
6					
7					
8					
9					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP3-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10Y5/4	100					Gravel/Sand	
2-20	10YR2/1	100					Loam	
20-32	10YR2/1	98	10YR4/6	2	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

Assumed A12

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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):	18
Saturation present?	Yes ☒	No ☐	Depth (inches):	16

(includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area C in offsite hydrology review

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP4-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat-convex
 Slope (%): 0 to 2 Lat: Long: Datum:
 Soil Map Unit Name Dundas-Cordova complex NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>Y</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u></u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1	<u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2	<u></u>	<u></u>	<u></u>	<u></u>	
3	<u></u>	<u></u>	<u></u>	<u></u>	
4	<u></u>	<u></u>	<u></u>	<u></u>	
5	<u></u>	<u></u>	<u></u>	<u></u>	
		<u>20</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>58</u> x 2 = <u>116</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>98</u> (A) <u>256</u> (B) Prevalence Index = B/A = <u>2.61</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1	<u></u>	<u></u>	<u></u>	<u></u>	
2	<u></u>	<u></u>	<u></u>	<u></u>	
3	<u></u>	<u></u>	<u></u>	<u></u>	
4	<u></u>	<u></u>	<u></u>	<u></u>	
5	<u></u>	<u></u>	<u></u>	<u></u>	
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2	<u>Ribes cynosbati</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3	<u>Equisetum pratense</u>	<u>18</u>	<u>Y</u>	<u>FACW</u>	
4	<u>Glechoma hederacea</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5	<u>Asclepias syriaca</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6	<u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7	<u></u>	<u></u>	<u></u>	<u></u>	
8	<u></u>	<u></u>	<u></u>	<u></u>	
9	<u></u>	<u></u>	<u></u>	<u></u>	
10	<u></u>	<u></u>	<u></u>	<u></u>	
		<u>78</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1	<u></u>	<u></u>	<u></u>	<u></u>	
2	<u></u>	<u></u>	<u></u>	<u></u>	
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP4-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-14	10YR3/2	100					Clay loam	
14-28	10YR3/1	95	10YR4/6	5	C	M	Clay loam	
28-36	10YR4/2	90	10YR4/6	10	C	M	Clay loam	
36-48	10YR5/1	90	10YR4/6	10	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP4-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex VWI Classification: PEM1A

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 4</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method.	

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP4-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-18	10YR2/1	100					Clay loam	
18-26	10YR4/1	95	10YR4/6	5	C	M	Clay loam	
26-30	10YR5/1	95	10YR4/6	5	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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 X Depth (inches): _____
 Water table present? Yes X No Depth (inches): 26
 Saturation present? Yes X No Depth (inches): 24
 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP4-2U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u></u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column totals <u>15</u> (A) <u>75</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

Stunted/ washout corn with majority of the area bare

SOIL

Sampling Point: SP4-2U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR2/1	97	10YR4/6	3	C	M	Loam	
10-28	10YR3/1	90	10YR4/6	10	C	M	Clay loam	
28-48	10YR4/2	85	10YR4/6	15	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): _____

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP4-2W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>Wetland 4</u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>2</u> x 5 = <u>10</u> Column totals <u>2</u> (A) <u>10</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>2</u>		<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>2</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Stunted/ washout corn with majority of the area bare

SOIL

Sampling Point: SP4-2W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR2/1	97	10YR4/6	3	C	M	Loam	
10-32	10YR3/1	90	10YR4/6	10	C	M	Clay loam	
32-48	10YR4/2	85	10YR4/6	15	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): _____

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry, Area B on offsite hydrology review

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP5-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u></u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u></u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>		
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

Bare washout area, stunted corn fringing area

SOIL

Sampling Point: SP5-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-8	10YR2/1	100					Loam	
8-24	10YR4/1	90	10YR4/6	10	C	M	Clay loam	
24-32	10YR3/1	90	10YR4/6	10	C	M	Clay loam	
32-48	10YR5/2	90	10YR4/6	10	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP5-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 5</u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u></u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Bare washout area, stunted corn fringing area

SOIL

Sampling Point: SP5-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-11	10YR2/1	100					Loam	
11-24	10YR4/1	90	10YR4/6	10	C	M	Clay loam	
24-36	10YR3/1	90	10YR4/6	10	C	M	Clay loam	
36-48	10YR5/2	90	10YR4/6	10	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry, Area A in the offsite hydrology review

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP6-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex
 Slope (%): 1 to 2 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u></u>
Hydric soil present?	<u>Y</u>	
Indicators of wetland hydrology present?	<u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column totals <u>15</u> (A) <u>75</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

Stunted/ washout corn

SOIL

Sampling Point: SP6-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-20	10YR2/1	100					Clay loam	
20-28	10YR2/1	90	10YR4/2	10	D	M	Clay loam	
28-34	10YR4/2	85	10YR4/6	5	C	M	Clay loam	
	10YR2/1	10						

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP6-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Cordova loam NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 6</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method.	

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>70</u> x 2 = <u>140</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>70</u> (A) <u>140</u> (B) Prevalence Index = B/A = <u>2.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phalaris arundinacea</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>	
2					
3					
4					
5					
6					
7					
8					
9					
		<u>70</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
Stunted/ washout corn

SOIL

Sampling Point: SP6-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-17	10YR2/1	100					Clay loam	
17-24	10YR4/2	95	10YR4/6	5	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): _____

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP7-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat
 Slope (%): 0 to 1 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Lerdal loam VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal circumstances" present? No
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column totals <u>15</u> (A) <u>75</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP7-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-15	10YR2/1	100					Clay loam	
15-24	10YR3/1	95	10YR4/6	5	C	M	Clay loam	
24-32	10YR4/2	85	10YR4/6	15	C	M	Clay loam	

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

Hydric Soil Indicators:

- ☐ Histisol (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:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP7-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name: Lerdal loam VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 7</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>40</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>1.25</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Typha angustifolia</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
2	<u>Equisetum pratense</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3					
4					
5					
6					
7					
8					
9					
10					
		<u>40</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP7-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR3/1	100					Clay loam	
4-18	10YR4/1	85	10YR4/6	15	C	M	Clay loam	
18-24	10YR5/1	85	10YR4/6	15	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: Tile
 Depth (inches): 24

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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? Yes ☐ No ☒ Depth (inches):
 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP8-1U
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Dundas-cordova complex VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology significantly disturbed? Are "normal circumstances" present? No
 Are vegetation , soil , or hydrology naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u></u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in cropped field.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column totals <u>15</u> (A) <u>75</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

Stunted/ washout corn

SOIL

Sampling Point: SP8-1U

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-12	10YR2/1	100					Clay loam	
12-36	10YR4/1	95	10YR4/6	5	C	M	Clay loam	
36-48	10YR5/2	95	10YR4/6	5	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP8-1W
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0 to 1 Lat: Long: Datum:
 Soil Map Unit Name Cordova loam NWI Classification: PEM1A

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation , soil , or hydrology naturally problematic?

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: <u>Wetland 8</u>
Hydric soil present? <u>Y</u>	
Indicators of wetland hydrology present? <u>Y</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method.	

VEGETATION -- Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1				
2				
3				
4				
5				
	<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>2</u> x 5 = <u>10</u> Column totals <u>2</u> (A) <u>10</u> (B) Prevalence Index = B/A = <u>5.00</u>
<u>Sapling/Shrub stratum</u> (Plot size: <u>15 ft Radius</u>)				
1				
2				
3				
4				
5				
	<u>0</u>	= Total Cover		
<u>Herb stratum</u> (Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: <u></u> Rapid test for hydrophytic vegetation <u></u> Dominance test is >50% <u></u> Prevalence index is ≤3.0* <u></u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u></u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1 <u>Zea mays</u>	<u>2</u>		UPL	
2				
3				
4				
5				
6				
7				
8				
9				
10				
	<u>2</u>	= Total Cover		
<u>Woody vine stratum</u> (Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1				
2				
	<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
Drowned out and stunted corn

SOIL

Sampling Point: SP8-1W

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-18	10YR2/1	95	10YR4/6	5	C	M	Clay loam	
18-25	10YR4/1	95	10YR4/6	5	C	M	Clay loam	
25-32	10YR4/1	80	10YR4/6	20	C	M	Clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- | |
|--|
| ☐ Coast Prairie Redox (A16) (LRR K, L, R) |
| ☐ Dark Surface (S7) (LRR K, L) |
| ☐ Iron-Manganese Masses (F12) (LRR K, L, R) |
| ☐ Very Shallow Dark Surface (TF12) |
| ☐ Other (explain in remarks) |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): _____

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site French Lk Rd site City/County: Dayton/Hennepin Sampling Date: 6/11/2020
 Applicant/Owner: See Joint Application State: MN Sampling Point: SP-X
 Investigator(s): A. Cameron, W. Effertz, K. Uhler Section, Township, Range: S 30, T120N, R22W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Linear/concave
 Slope (%): 6 to 10 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Lester loam VWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal circumstances" present? No
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

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

Climatic conditions were typical based on the gridded database method and above the normal range based on the 30-day precipitation rolling average method. Soils and vegetation were significantly disturbed due to sample in a cropped field

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30 ft Radius</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>10</u> x 5 = <u>50</u> Column totals <u>10</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>5.00</u>
Sapling/Shrub stratum	(Plot size: <u>15 ft Radius</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5 ft Radius</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Zea mays</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>10</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30 ft Radius</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

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

SOIL

Sampling Point: SP-X

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR3/1	100					Loam	
4-12	10YR3/1	95	10Yr4/6	5	C	M	Loam	
12-18	10YR3/2	100					Caly loam	
18-42	10YR3/1	100					Caly loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Some stressed corn due to observed erosion/washout

French Lake Road Site

Wetland Delineation Report

APPENDIX C

Precipitation Data

Minnesota State Climatology Office

State Climatology Office - DNR Division of Ecological and Water Resources

[home](#) | [current conditions](#) | [journal](#) | [past data](#) | [summaries](#) | [agriculture](#) | [other sites](#) | [about us](#) 

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Hennepin** township number: **120N**

township name: **Dayton** range number: **22W**

nearest community: **Fletcher** section number: **30**

Aerial photograph or site visit date:

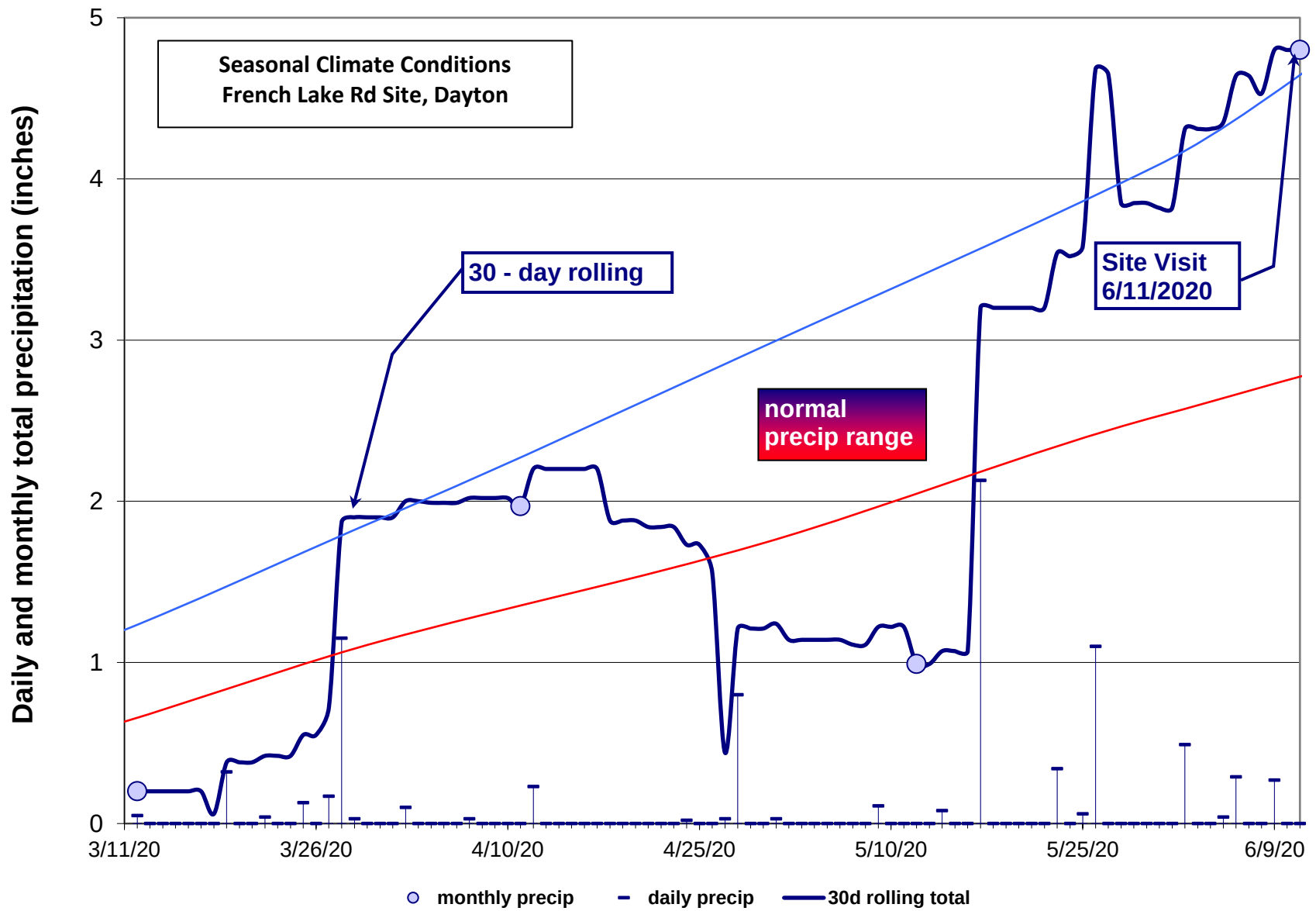
Thursday, June 11, 2020

Score using 1981-2010 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates .	first prior month: May 2020	second prior month: April 2020	third prior month: March 2020
estimated precipitation total for this location:	3.85	1.08R	1.87R
there is a 30% chance this location will have less than:	2.53	1.74	1.13
there is a 30% chance this location will have more than:	4.09	2.96	1.89
type of month: dry normal wet	normal	dry	normal
monthly score	3 * 2 = 6	2 * 1 = 2	1 * 2 = 2
multi-month score:			
6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)			
10 (normal)			

Other Resources:

- [retrieve daily precipitation data](#)
- [view radar-based precipitation estimates](#)
- [view weekly precipitation maps](#)
- [Evaluating Antecedent Precipitation Conditions](#) (BWSR)



Dayton, MN: Precipitation Summary

Source: Minnesota Climatology Working Group

Monthly Totals: 2020

Target: T120N R22W S30, Lat:45.17442 Lon:93.51107

mon	year	cc	tttN	rrw	ss	nnnn	oooooooo	pre
Jan	2020	27	119N	22W	1	SWCD		.79
Feb	2020	27	119N	22W	1	SWCD		.42
Mar	2020	27	119N	22W	1	SWCD		1.90
Apr	2020	27	119N	22W	1	SWCD		1.21
May	2020	27	119N	22W	1	SWCD		3.85
Jun	2020	27	119N	22W	1	SWCD		3.53

April/May/June Daily Records

Date	Precip.	Date	Precip.	Date	Precip.
Apr 1, 2020	0	May 1, 2020	.03	Jun 1, 2020	0
Apr 2, 2020	.10	May 2, 2020	0	Jun 2, 2020	.49
Apr 3, 2020	T	May 3, 2020	0	Jun 3, 2020	0
Apr 4, 2020	0	May 4, 2020	0	Jun 4, 2020	0
Apr 5, 2020	0	May 5, 2020	0	Jun 5, 2020	.04
Apr 6, 2020	0	May 6, 2020	0	Jun 6, 2020	.29
Apr 7, 2020	.03	May 7, 2020	0	Jun 7, 2020	0
Apr 8, 2020	0	May 8, 2020	0	Jun 8, 2020	0
Apr 9, 2020	T	May 9, 2020	.11	Jun 9, 2020	.27
Apr 10, 2020	0	May 10, 2020	T	Jun 10, 2020	T
Apr 11, 2020	0	May 11, 2020	0	Jun 11, 2020	0 Site Visit
Apr 12, 2020	.23	May 12, 2020	0	Jun 12, 2020	0
Apr 13, 2020	T	May 13, 2020	0	Jun 13, 2020	0
Apr 14, 2020	T	May 14, 2020	.08	Jun 14, 2020	0
Apr 15, 2020	0	May 15, 2020	0	Jun 15, 2020	0
Apr 16, 2020	0	May 16, 2020	0	Jun 16, 2020	0
Apr 17, 2020	0	May 17, 2020	2.13	Jun 17, 2020	0
Apr 18, 2020	0	May 18, 2020	0	Jun 18, 2020	.78
Apr 19, 2020	0	May 19, 2020	0	Jun 19, 2020	0
Apr 20, 2020	T	May 20, 2020	0	Jun 20, 2020	0
Apr 21, 2020	0	May 21, 2020	0	Jun 21, 2020	.01
Apr 22, 2020	0	May 22, 2020	0	Jun 22, 2020	0
Apr 23, 2020	0	May 23, 2020	.34	Jun 23, 2020	.04
Apr 24, 2020	.02	May 24, 2020	0	Jun 24, 2020	.09
Apr 25, 2020	0	May 25, 2020	.06	Jun 25, 2020	0
Apr 26, 2020	0	May 26, 2020	1.10	Jun 26, 2020	0
Apr 27, 2020	.03	May 27, 2020	0	Jun 27, 2020	0
Apr 28, 2020	.80	May 28, 2020	0	Jun 28, 2020	1.09
Apr 29, 2020	0	May 29, 2020	0	Jun 29, 2020	.43
Apr 30, 2020	0	May 30, 2020	0	Jun 30, 2020	0
		May 31, 2020	0		

1981-2010 Summary Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.38	0.40	1.13	1.74	2.53	3.03	2.61	3.27	2.14	1.32	0.90	0.53	16.11	25.78	26.71
70%	0.71	0.88	1.89	2.96	4.09	5.34	4.09	4.56	4.22	3.13	2.23	1.29	20.82	32.38	32.02
mean	0.71	0.64	1.57	2.56	3.32	4.19	3.80	4.10	3.43	2.42	1.62	1.01	18.85	29.38	29.19

French Lake Road Site

Wetland Delineation Report

APPENDIX D

Aerial Review for Offsite Hydrology Assessment

Field data sheet reference (if applicable): _____

Wetland Hydrology from Aerial Imagery – Recording Form

Project Name: French Lake Road Site **Date:** 6/24/2020 **County:** Hennepin County

Investigator: K. Uhler **Legal Description (T, R, S):** S30 T120N R22W

Summary Table

Date Image Taken (M-D-Y)	Image Source	Climate Condition (wet, dry, normal) ⁱ	Image Interpretation(s)							
			Area: A	Area: B	Area: C	Area: D				
6-15-20	KES	Normal	DO	DO	NSS	SS				
4-18-18	Hennepin Co.	Normal	NSS	SS	SS	SS/WS				
7-1-17	FSA	Wet	CS/DO	CS/DO	CS	WS				
4-5-17	Google Earth	Normal	SS	SS/AP	NSS	SS				
5-1-16	Met Council	Normal	NSS	SS	NSS	NSS				
9-15-15	FSA	Normal	CS	CS	NV	CS				
7-1-08	FSA	Normal	DO	CS	NV	NV				
4-17-06	USGS	Normal	SS	SS	NSS	NSS				
Normal Climate Condition										
Number of normal years (7)			7	7	7	7				
Number with wet signatures			5	7	1	5				
Percent with wet signatures			71	100	14	71				

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.
- 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.

ⁱ Use [MN State Climatology website](#) to determine climate condition when image was take

Wetland Determination from Aerial Imagery – Recording Form

Project Name: French Lake Road Site **Date:** 6/24/2020 **County:** Hennepin County

Investigator: K. Uhler **Legal Description (T, R, S):** S30 T120N R22W

Use the Decision Matrix below to complete Table 1.

Hydric Soils present ¹	Identified on NWI or other wetland map ²	Percent with wet signatures from Exhibit 1	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 present
Yes	No	>50%	No	Yes
Yes	No	30-50%	Yes	Yes, if other hydrology indicators 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 present
No	No	30-50%	Yes	Yes, if other hydrology indicators 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.

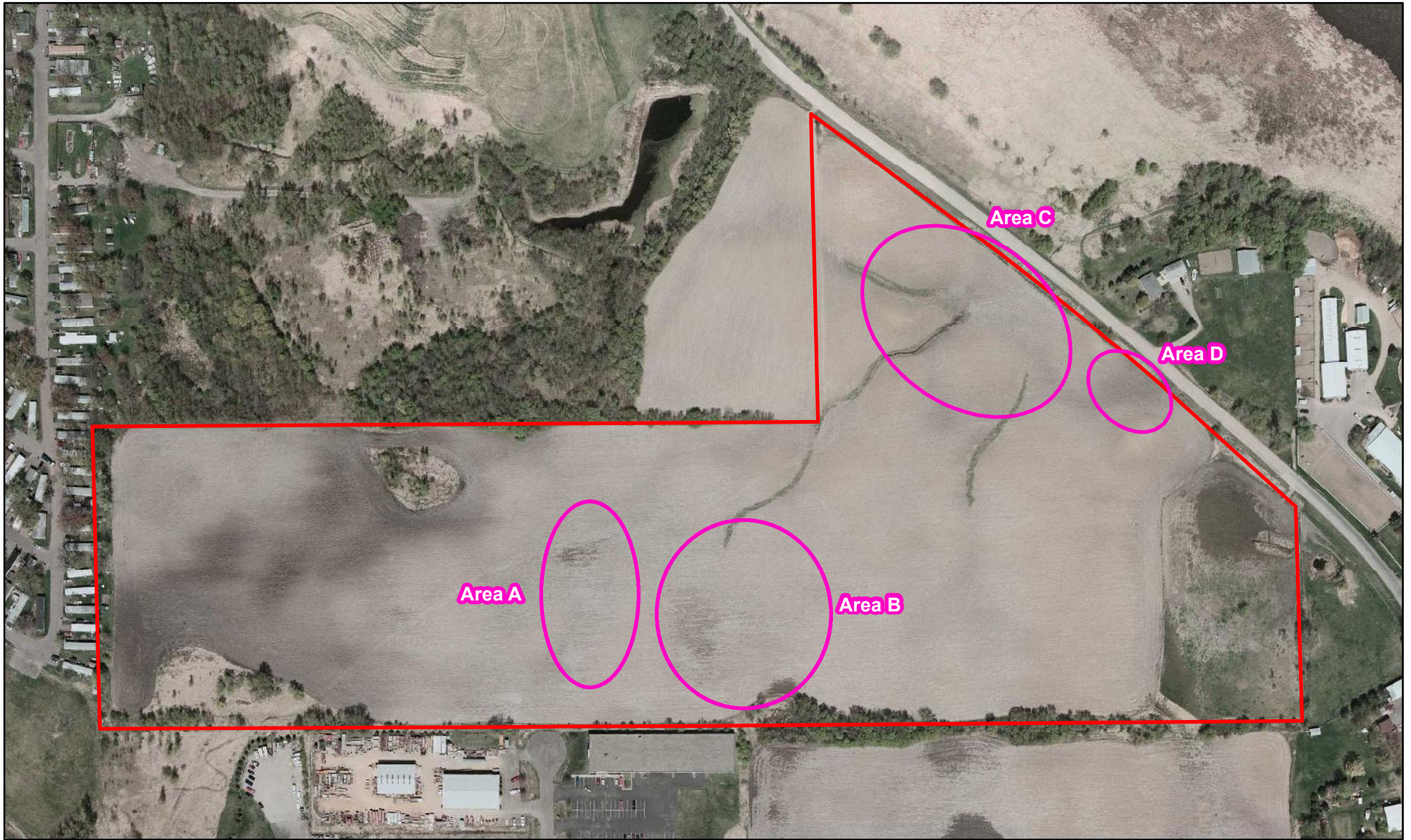
² At minimum, the most updated NWI data available for the area must be reviewed for this step. Any and all other local or regional wetland maps that are publically available should be reviewed.

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 indicator (geomorphic position).

Table 1.

Area	Hydric Soils Present	Identified on NWI or other wetland map	Percent with wet signatures from Exhibit 1	Other hydrology indicators present ¹	Wetland?
A	N	N	71	Y	Wetland 5
B	N	N	100	Y	Wetland 4
C	Y	N	14	N/A	No
D	N	N	71	Y	Wetland 2

¹ Answer “N/A” if field verification is not required and was not conducted.



Offsite Hydrology Assessment (2006 Aerial Imagery)



0 300
Feet



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons, 2006 USGS Imagery

**French Lake Road Site (KES 2020-054)
Dayton, Minnesota**

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Offsite Hydrology Assessment (2008 Aerial Imagery)



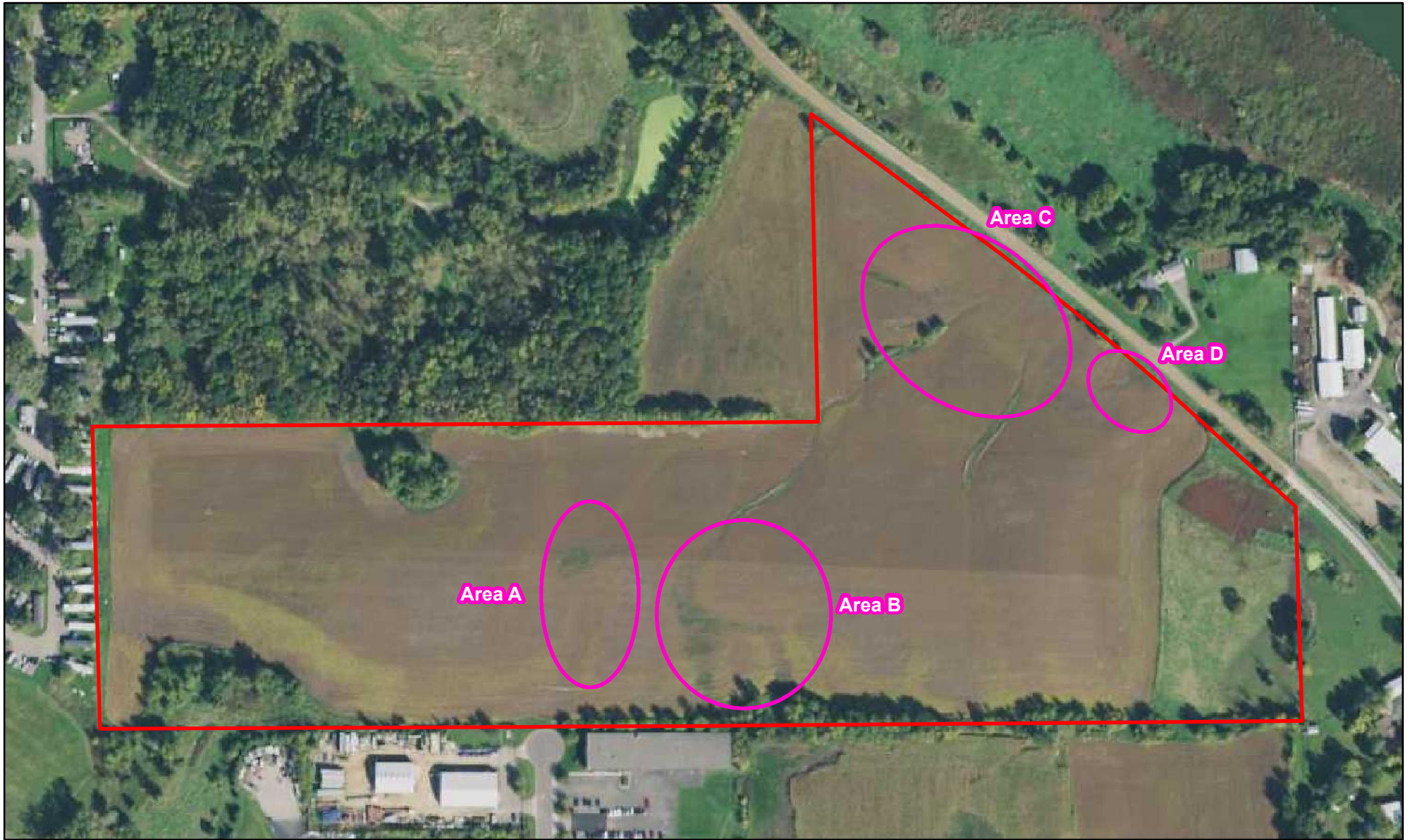
0 300
Feet



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons, 2008 FSA Imagery

French Lake Road Site (KES 2020-054)
Dayton, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Offsite Hydrology Assessment (2015 Aerial Imagery)



0 300
Feet



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons, 2015 FSA Imagery

French Lake Road Site (KES 2020-054)
Dayton, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Offsite Hydrology Assessment (2016 Aerial Imagery)



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons, 2016 Met Council Imagery

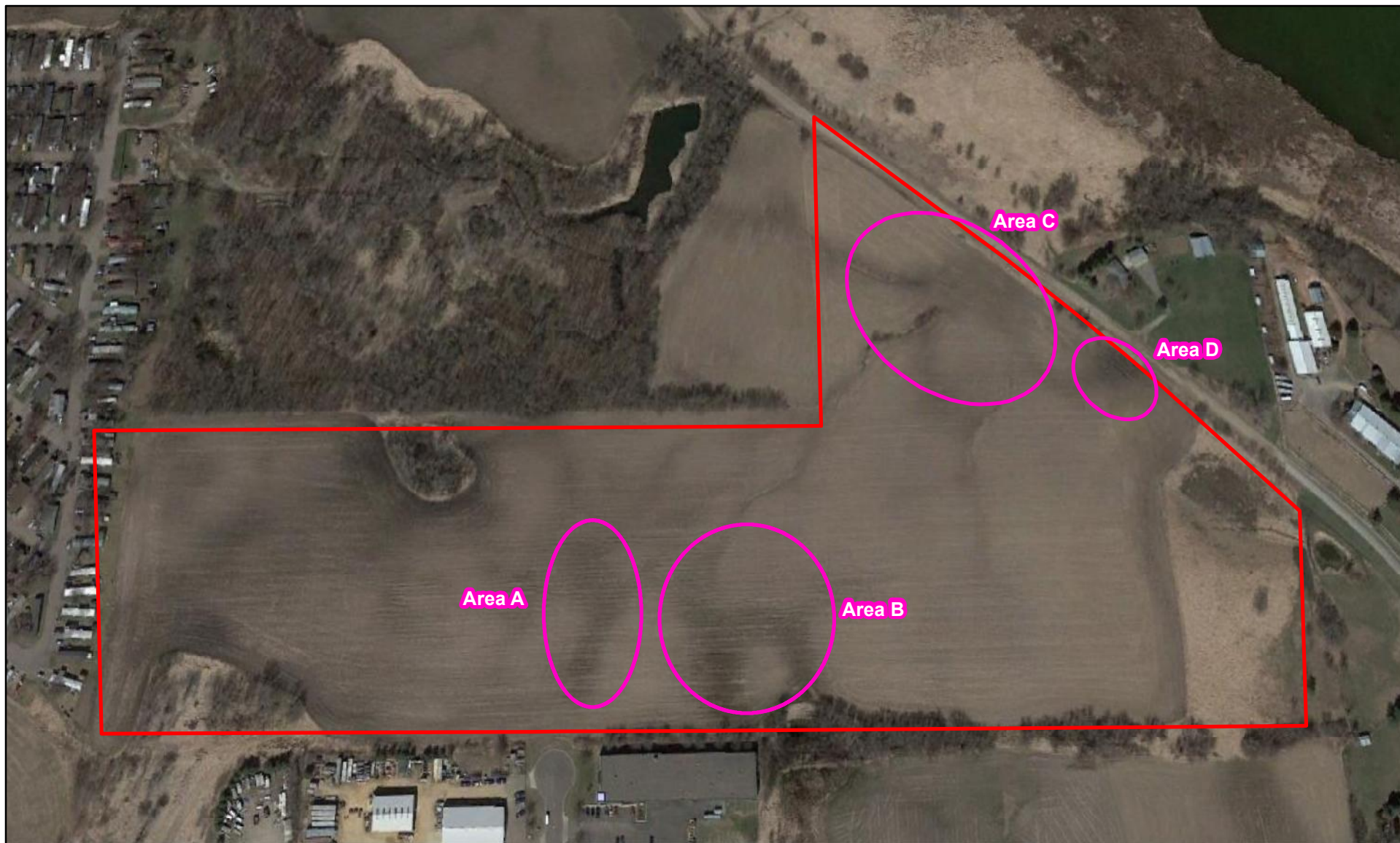


0 300
Feet



French Lake Road Site (KES 2020-054)
Dayton, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Offsite Hydrology Assessment (2017 Aerial Imagery)



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons, 2017 Google Earth Imagery



0 300
Feet

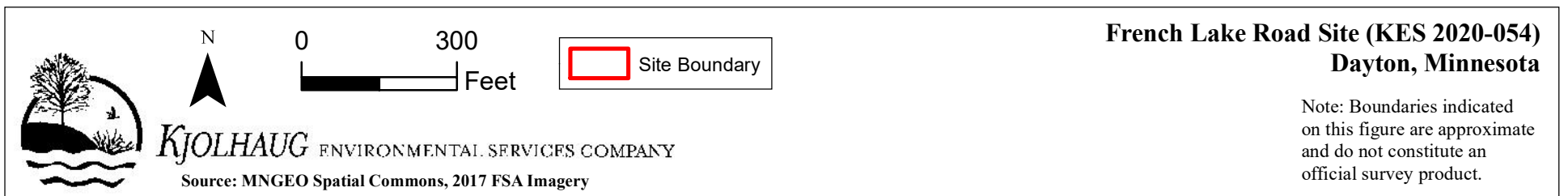


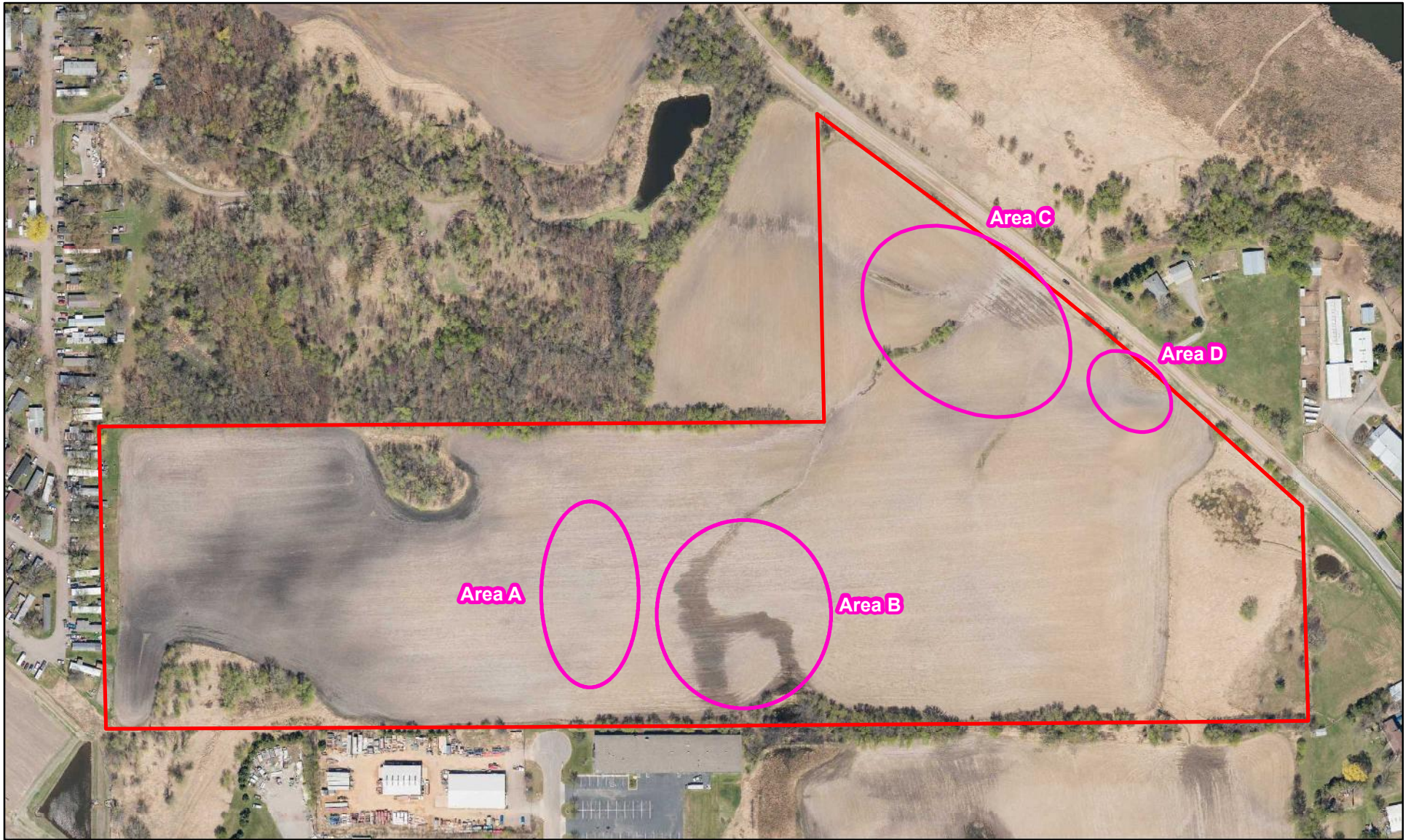
French Lake Road Site (KES 2020-054)
Dayton, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Offsite Hydrology Assessment (2017 Aerial Imagery)





Offsite Hydrology Assessment (2018 Aerial Imagery)



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: MNGEO Spatial Commons, 2018 Hennepin Co Imagery



0 300
Feet



French Lake Road Site (KES 2020-054)
Dayton, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Offsite Hydrology Assessment (2020 Aerial Imagery)



0 300
Feet



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MNGEO Spatial Commons, 2020 KES Imagery

French Lake Road Site (KES 2020-054)
Dayton, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

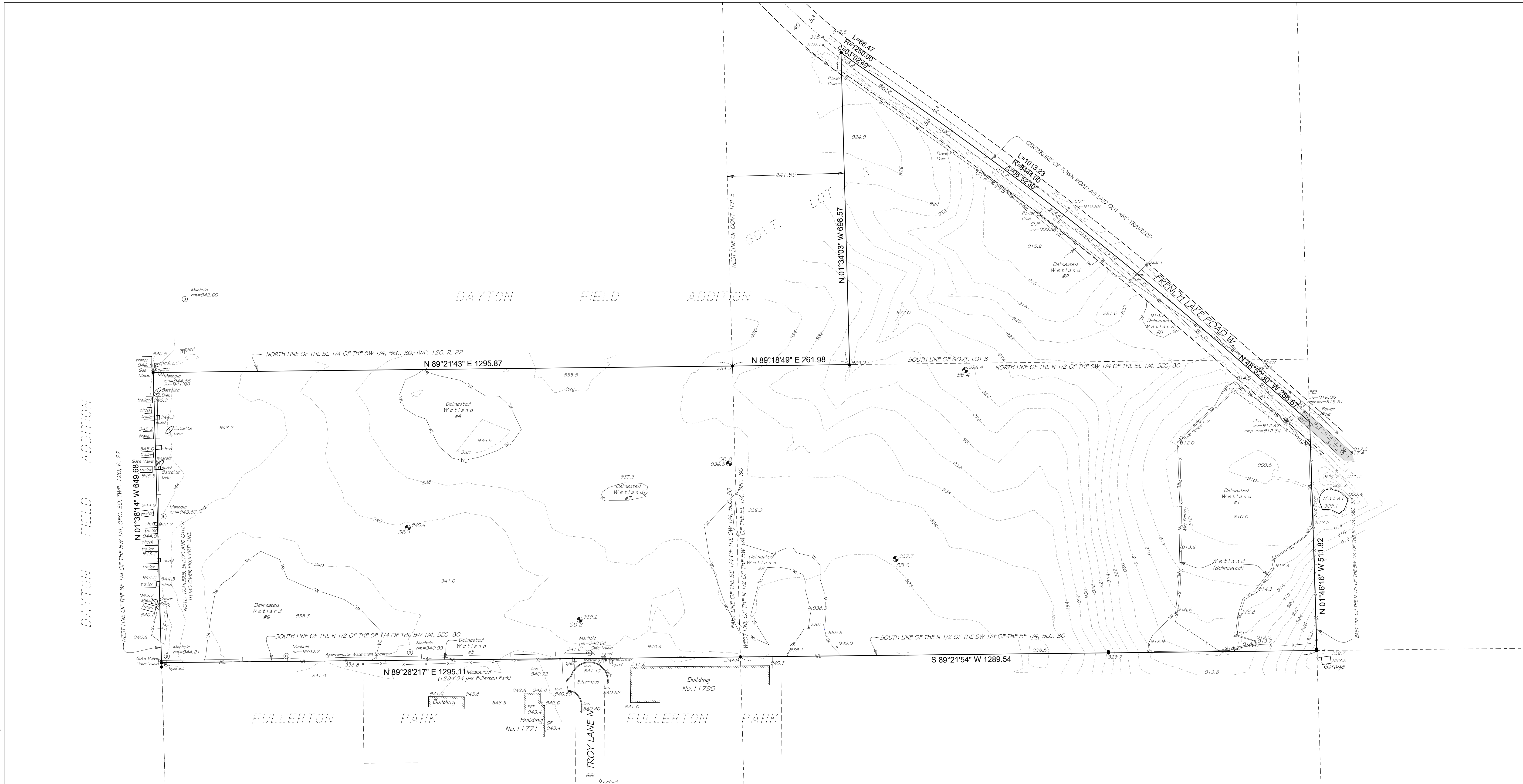
French Lake Road Site

Wetland Delineation Report

APPENDIX E

Wetland Boundary Survey

F:\survey\30120-22 - hennepin\56 unassigned\01 Surveying - 89019\01 CAD\01 Source\01 Survey Base.dwg



Legal Description

The North Half of the Southeast Quarter of the Southwest Quarter and that part of the North Half of the Southwest Quarter of the Southeast Quarter lying Southwesterly of Town Road (now known as French Lake Road West) also, that part of Government Lot 3 lying East of the West 261.95 feet thereof and Southwesterly of Town Road (now known as French Lake Road West) all in Section 30, Township 120, Range 22, Hennepin County, Minnesota.
Subject to easement and restrictions of record, if any.

Zoning Information

Property Currently Zoned: A-1, Agricultural District

Zoning Ordinance Requirements:

Building Setbacks
Front - 30 feet
Side Yard - 10 feet
Rear Yard - 20 feet

Minimum lot size - 40 acres
Minimum Lot Frontage - 300 feet
Maximum Impervious Surface Coverage - 10%
One unit per 40 acres

Refer to City code for additional requirements

Legend

- Denotes Found Iron Monument
- Denotes Iron Monument Set
- ⊙ Soil Boring
- ⚡ Light
- ⚡ Power Pole
- ⚡ Hydrant
- ⊕ Sanitary Manhole
- ⊕ Storm Manhole
- ⊕ Water Manhole
- ⊕ Catch Basin
- ⊕ Telephone Pedestal Riser
- ⊕ Cable Pedestal Riser
- ⊕ Electric Box or Transformer
- Denotes Existing Contours
- Denotes Existing Elevation
- Delineated Wetland (see note)
- Fence
- Overhead Wires
- ⊕ Mobile Home

Miscellaneous Notes

- Property Address: Address Unassigned
PID No.: 30-120-22-34-0001
- Area of Parcel = 45.655 acres (includes road) Area excluding road = 44.64 acres
- Property is in Flood Zone "X" (area of minimal flood hazard) per FEMA panel map number 27053C0045F dated 11/04/2016.
- Title insurance commitment showing property description and encumbrances of record, if any, not provided, survey subject to change.
- Delineated wetlands shown per information from Kjouhaug Environmental Services Company.
Total area of all delineated wetlands shown = 275157 sq.ft (6.32 acres)
Area of property outside of wetland excluding road = 38.32 acres
- Benchmark: MNDOT Disk 2743N (1954)
Elevation = 949.59 feet (NAVD 88)

FIELD BY:
RP / CH
DRAWN BY:
CHECKED BY:
GRP

I certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed land Surveyor under the laws of the State of Minnesota.
Surveyed this 17th day of June 2020.
Signed:
Gregory R. Prasch Registration No. 24992

Revisions:

6-26-20 delineated wetlands added and additional areas

DEMARC
LAND SURVEYING & ENGINEERING
7601 73rd Avenue North
Minneapolis, Minnesota 55428
(763) 560-3093
Demarcinc.com

FRANK FELLA
1740 116th Ave. NW
Coon Rapids, MN 55448

EXISTING CONDITIONS
SURVEY

PROJECT: 89019
FB No: 1115-08
SHEET NO.
1 OF 1