BOLTON & MENK

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Type & Boundary Application June 8th, 2021

Le Sueur Economic Development Authority

City of Le Sueur, Le Sueur County, Minnesota

Submitted by:
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: 507-625-4171
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WETLAND DELINEATION REPORT

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:	Le Sueur Economic Development Authority
Mailing Address:	203 2nd St S Le Sueur, MN 56058
Phone:	507-665-6401
E-mail Address:	

Authorized Contact (do not complete if same as above):	
Mailing Address:	
Phone:	
E-mail Address:	

Agent Name:	Dan Donayre | Natural Resource Specialist | Bolton & Menk, Inc.
Mailing Address:	1960 Premier Drive | Mankato, MN | 56001
Phone:	507-625-4171 ext 2646
E-mail Address:	dando@bolton-menk.com

PART TWO: Site Location Information

County: Le Sueur **City/Township: Le Sueur**

Parcel ID and/or Address: 21.017.7500

Legal Description (Section, Township, Range): Sec 17, T112N, R25W

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): 147 acres

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.

PART FOUR: Aquatic Resource Impact[1] 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]

[1]If 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)".
[2]Impacts 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).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer 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:

N/A

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:

I hereby authorize **Bolton & Menk, Inc** 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

Appendix

BOLTON & MENK

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Wetland Delineation Report June 8th, 2021

Le Sueur Economic Development Authority

City of Le Sueur, Le Sueur County, Minnesota

Submitted by:
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Exhibit B: 2-Foot LiDAR Contours Map
Exhibit C: National Wetlands Inventory Map
Exhibit D: Public Waters Inventory Map
Exhibit E: Le Sueur County Soil Survey Map
Exhibit F: Delineated Wetlands Map
Exhibit G: Delineation Data Sheets
Exhibit H: Historical Imagery

I. INTRODUCTION

The Le Sueur Economic Development Authority (EDA) is proposing site improvements to their property located to the west side of Highway 169 in Le Sueur, MN (Parcel ID: 210177500). This report details the findings of the field delineation completed on June 2nd, 2021.

The project is found in Section 17, in Township 112 North of Range 25 West.

II. WETLAND DELINEATION METHODOLOGY

The wetland boundaries were delineated and staked in the field in June 2021, using methods described in the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)". Wetlands identified were classified using "Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979)", "Wetlands of the United States (United States Fish and Wildlife Service Circular No. 39, 1971 edition)" and "Wetland Plants and Plant Communities of Minnesota and Wisconsin" (Eggers and Reed Third Edition). Subsequently, the three mandatory technical criteria for wetland determinations are as follows:

Hydrophytic Vegetation. A hydrophytic plant community is present when the dominant plant species present can endure prolonged inundation and/or soil saturation during the growing season. A plant's Wetland Indicator Status is determined using the 2016 National Wetland Plant List for Minnesota, published by the Army Corp of Engineers.

Hydric Soils. A hydric soil is defined as a soil that is formed under conditions of saturation, flooding or ponding long enough during the growing season (the portion of the year when there is above ground growth and development of vascular plants and/or soil temperature at 12 inches below the soil surface is above 41 degrees Fahrenheit or higher) to develop anaerobic conditions in the upper part.

Wetland Hydrology. An area has wetland hydrology if it experiences 14 or more consecutive days of flooding, ponding or a water table within 12 inches of the surface during the growing season at a minimum frequency of five out of ten years. This is determined by using both primary and secondary Wetland Hydrology indicators.

III. BACKGROUND INFORMATION

Prior to conducting a field investigation of this site, Exhibits A through E were used to complete a preliminary evaluation. The data gathered during the preliminary investigation was used as described below:

Exhibit A is a location map of the study area.

Exhibits B is an aerial photo with topographic information overlaid on it. This provides information regarding topography of the site, helping to identify areas that may have wetland characteristics.

Exhibit C is the National Wetlands Inventory of the site and surrounding properties. This information is used to complete a preliminary investigation of the wetlands that may or may not exist on the site.

Exhibit D is used to identify waters that are regulated by the DNR. This exhibit shows where there are DNR public waters relative to the site.

Exhibit E is the Le Sueur County Soil Survey and is used to identify hydric soils that may lie within the study area.

Delineation Exhibits F and G were prepared from the information gathered at the site.

Exhibit F is the site map showing the delineated aquatic resources.

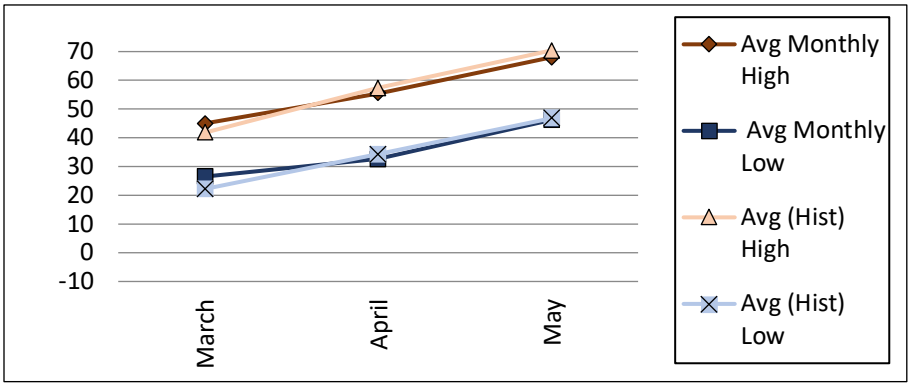
Exhibit G includes the wetland delineation data sheets.

Exhibit H includes historical images of study area.

IV. CLIMATE DATA

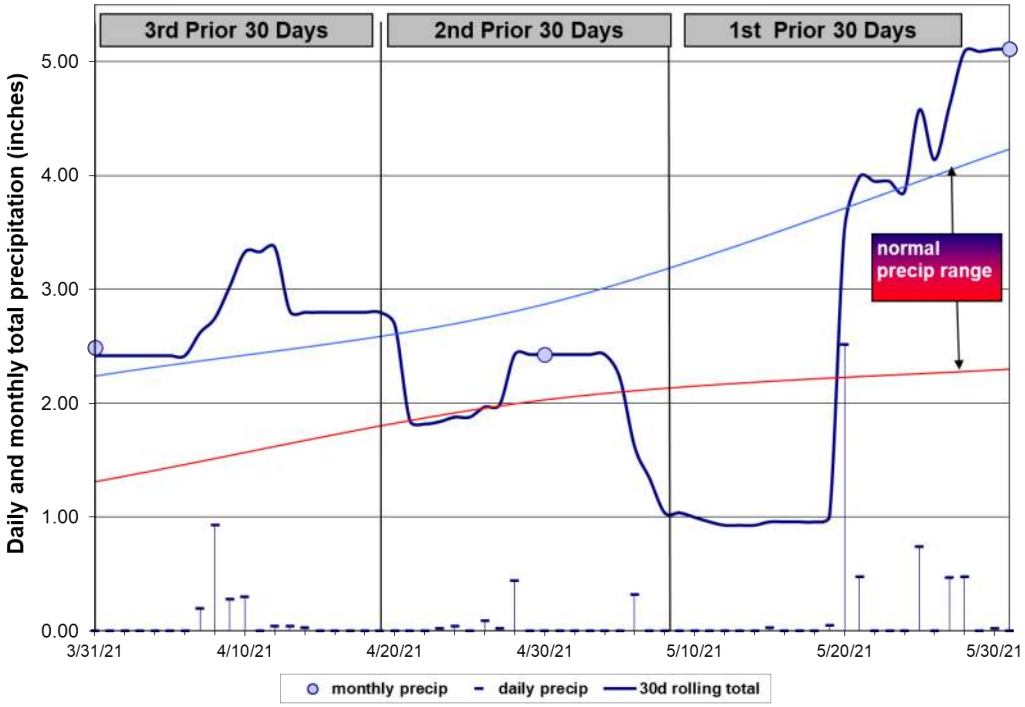
The monthly temperature table below shows the average high and low temperatures for the three months prior to the field delineation, along with the historical averages for these months. The monthly low and high temperatures have been within normal ranges for this period.

MONTHLY TEMPERATURE RANGE



Antecedent precipitation was evaluated using a combination of the NRCS Method and the Rolling Totals Method. The analysis found that precipitation was well above normal at the time of site visit, over the last three months prior to site visit precipitation was variable.

ANTECEDENT PRECIPITATION CONDITIONS



This climatic data was gathered using the Climatology Working Group Website, http://climate.umn.edu/ and the National Weather Service Forecast Office, http://w2.weather.gov/climate/. The information for the investigation was retrieved from the WETS Station in Jordan 1SSW (ID 214176)

V. FINDINGS

On June 2nd, 2021 a field investigation was performed to evaluate and verify the existence and boundary of any aquatic resources located within the study area. Three wetland complexes and three tributaries are found to exist within the study area. The following describes the aquatic resources identified, together with a brief description of wetland types and observations made during the field investigation.

Wetland 1 (Level 1 site 1) (W1-A & W1-B):
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: Type 1
Field Observation Eggers and Reed: Seasonally Flooded Basin,
Soil Mapping Unit(s): 414-Hamel Loam,

Photo 1: View of Wetland 1 looking East.

Wetland 1 is a shallow basin at the bottom of a hillside. A Seasonally Flooded Basin is found in the north-center section of the study area. Water flows downhill through drainage feature 1 and continue to runs off-site into an unnamed channel (Tributary 1).

The field investigation found that the site has met all three wetland indicators and this wetland should be considered a palustrine emergent nonpersistent seasonally saturated (PEM2B). Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography as vegetation was disturbed by agricultural row crops.

Photo 2: View of the W1-A (blue flag) & W1-B (green flag) sample points looking into the wetland. The pink flag is the wetland boundary.

At the W1-A wetland pit location, the plant community was dominated by corn and yellow-nutsedge at the herb stratum. The W1-B upland pit location was dominated by corn and lamb's quarter. Only the wetland pit location met hydrophytic vegetation, while the upland pit location did not meet.

Soils in the W1-A wetland pit location met the hydric soil indicators A11-Depleted Below Dark Surface and A12-Thick Dark Surface. Soils in the W1-B upland pit location met the hydric soil indicators A11-Depleted Below Dark Surface and A12-Thick Dark Surface. Both pit locations met hydric soil indicators.

The W1-A wetland location met the secondary hydrology indicators of B6-Surface Soil Crack, C6-Saturation Visible on Aerial Imagery & D2-Geomorphic Position. The W1-B upland pit location only met one secondary indicator of B6-Surface Soil Crack. Only the wetland pit location met hydrology indicators.

Wetland 7 (W7-A & W7-B):
NWI Cowardin: PEM1A & PFO1A
PWI (Hydro) ID: None
Field Observation Circular 39: Types 2 & 7
Field Observation Eggers and Reed: Fresh (wet) Meadow, Wooded Swamp
Soil Mapping Unit(s): 414-Hamel Loam & 945F-Lester-Belview complex

Photo 3: View of the W2-A & W2-B sample points looking west at transect.

Wetland 7 is a complex of wetland systems that is perched above the unnamed channel. Tributary 1 and a drainage feature are found to move water to this area.

The field investigation found that the site has met all three wetland indicators and this wetland complex should be considered a combination of palustrine emergent seasonally saturated (PEMB) and palustrine forested broad-leaved deciduous seasonally saturated (PFO1B). Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography.

At the W7-A wetland pit location, the plant community was dominated Boxelder at the tree stratum and at the herb stratum corn and yellow-nutsedge. The W7-B upland pit location was dominated by corn at the herb stratum. Only the wetland pit location met hydrophytic vegetation, while the upland pit location did not meet.

Soils in the W7-A wetland pit location met the hydric soil indicator A12-Thick Dark Surface. Soils in the W7-B upland pit location met the hydric soil indicator A12-Thick Dark Surface. Both pit locations met hydric soil indicators.

The W7-A wetland location met the secondary hydrology indicators of B6-Surface Soil Crack, C6-Saturation Visible on Aerial Imagery & D2-Geomorphic Position. The W7-B upland pit location did not meet any hydrology indicators. Only the wetland pit location met hydrology indicators.

Wetland 8 (W8-A & W8-B):
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: Type 2
Field Observation Eggers and Reed: Fresh (wet) Meadow
Soil Mapping Unit(s): 414-Hamel Loam, 106C2-Lester Loam

Wetland 8 is a strip of fringed wetland along a drainage feature that flows west downhill.

The field investigation found that the site has met all three wetland indicators and this wetland complex should be considered a palustrine emergent persistent seasonally saturated (PEM1B). Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography.

Photo 4: View of the W3-A (blue flag) & W3-B (green flag) sample points looking west at transect. Pink flag is the wetland boundary.

At the W8-A wetland pit location, the plant community was dominated peach leaved willow at the sapling stratum and at the herb stratum is awl-fruited sedge, reed canary grass and giant goldenrod. The W8-B upland pit location was dominated by corn at the herb stratum. Only the wetland pit location met hydrophytic vegetation, while the upland pit location did not meet.

Soils in the W8-A wetland pit location met the hydric soil indicator A12-Thick Dark Surface. Soils in the W8-B upland pit location met the hydric soil indicator A12-Thick Dark Surface. Both pit locations met hydric soil indicators.

The W8-A wetland location met primary hydrology indicator of A3-Saturation and secondary indictor B6-Surface Soil Crack. The W8-B upland pit location did not meet any hydrology indicators. Only the wetland pit location met hydrology indicators.

Wetland 9:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: Type 1
Field Observation Eggers and Reed: Seasonally Flooded Basin,
Soil Mapping Unit(s): 414-Hamel Loam,

Wetland 4 is a mosaic forested wetland located in the wooded area of the subject property. This wetland is outside the developable areas. Therefore, it was not delineated but was verified to exist. If development were to take place in these areas, than the wetland will have to be delineated.

Wetland 10:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: Type 1
Field Observation Eggers and Reed: Seasonally Flooded Basin,
Soil Mapping Unit(s): 414-Hamel Loam,

Wetland 5 is a mosaic forested wetland located in the wooded area of the subject property. This wetland is outside the developable areas. Therefore, it was not delineated but was verified to exist. If development were to take place in these areas, than the wetland will have to be delineated.

Site 2:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: None
Field Observation Eggers and Reed: None
Soil Mapping Unit(s): 109-Cordova clay loam

Photo 5: View of site 2 looking into Drainage Feature 1

Site 2 is found just west of Drainage Feature 1, in a large depressional basin that continues to flow to Tributary 2. This was area found in the off-site as a potential site to investigate for wetlands.

At site 2 pit location, planted corn was the dominating species in the herb stratum. Site 2 did not meet hydrophytic vegetation indicators.

Soil at site 2 did meet hydric soil indicator A12- Thick Dark Surface.

Site 2 did meet two secondary indicators of hydrology, B6- Surface Soil Crack & D2-Geomorphic Position. Site 2 did meet indicators of wetland hydrology.

Even though hydric soil and wetland hydrology was present, there was no hydrophytic vegetation to make this a wetland. Site 2 is not a wetland.

Site 3: Once on site, it was determined not a wetland based on topography and low off-site percentage of potential wetland (25%). 4 wet signatures hit in the level 1 delineation for this site. The soil was not mapped as hydric soil.

Site 4: Once on site, it was determined not a wetland based on topography and low off-site percentage of potential wetland (6%). Only 1 wet signature hit in the level 1 delineation for this site. The soil was not mapped as hydric soil.

Site 5:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: None
Field Observation Eggers and Reed: None
Soil Mapping Unit(s): 106C2-Lester Loam

Site 5 is found in the North-east section of the study area. Drainage feature 1 flows just south of the sampled area. This area was assumed to be a fringed wetland from the drainage feature but further investigation proved to be not a wetland system.

At Site 5 pit location, boxelder dominated the sapling stratum, while planted corn, yellow-nutsedge and lambs quarter dominated the herb stratum. Hydrophytic vegetation was met at this site.

Photo 6: View of investigation of site 5. Blue flag is where soil boring occurred.

Soil at site 5 pit location did not meet any hydric soil indicators.

The site 5 pit location did meet hydrology indicators by meeting two secondary indicators, B6-Surface Soil Crack and D2-Geomorphic Position.

Even though hydric vegetation was present and this site had hydrology, the lack of hydric soil deemed this site not a wetland.

Site 6:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: None
Field Observation Eggers and Reed: None
Soil Mapping Unit(s): 106C2-Lester Loam

Site 6 is found just east of site 1 and is higher in elevation by a bit but there was sitting water on the landscape so was an indicator to possible wetland.

Photo 7: View of investigation of site 6. Blue flag is where soil boring occurred.

At Site 6 pit location, planted corn and rough pig root dominated by the herb stratum. Site 2 did meet hydrophytic vegetation indicators.

Soil at site 6 pit location did not meet any hydric soil indicators.

The site 6 did meet hydrology two secondary indicators of B6-Surface soil crack and D2-Geomorphic Position.

Even though hydrophytic vegetation and hydrology indicators were met, this site is not a wetland because of the lack hydric soil.

Tributary 1 (Unnamed channel):

NWI Cowardin: PFO1A, PEM1A, PEM1Ad,
PWI (Hydro) ID: 124050
Field Observation Circular 39: None
Field Observation Eggers and Reed: None
Soil Mapping Unit(s): 945F-Lester-Belview complex, 462-Minneiska fine sandy loam, 468-Otter silt loam, 414-Hamel Loam, 106C2-Lester Loam, 123- Dundas silt loam

Photo 8: View of Tributary 1 unnamed channel (DNR hydro ID: 124050).

The Unnamed Channel sample point was taken from observations along the northern boundary of the study area. The channel flows North to south and weaves in and out of the study area. On the southern part the bank is very steep while on the northern section the bank is less steep. Water on the landscape runs from east to west flowing from agricultural fields into a variety of tributaries or drainage features to then flow into Unnamed channel. This area is not a wetland because of the defined unvegetated bed and bank that is present in the channel. Hydrology from the Unnamed Creek will continue south and flow off site into the Minnesota River. At this sample point, the tributary was approximately 3-feet wide from the top of bank, with an OHWM width of approximately 6-feet. Bank heights of the creek were approximately 2-feet tall on either side, with a water depth of approximately 6-inches or less.

Tributary 2:
NWI Cowardin: PFO1A & PEM1A
PWI (Hydro) ID: None
Field Observation Circular 39: None
Field Observation Eggers and Reed: None
Soil Mapping Unit(s): 109-Cordova clay loam, 414-Hamel loam, 106C2- Lester loam, 239B-Le Sueur loam

Photo 9: View of Tributary 2

This tributary starts with a culvert from tiled farm field and weaves through the NWI (PFO1A) and eventually will flow offsite and meet with Tributary 1 to continue south to flow into The Minnesota River. At this sample point, the tributary was approximately 1-foot wide from the top of bank, with an OHWM width of approximately 5ft. This area is not a wetland because of the defined unvegetated bed and bank that is present in the channel. Bank heights of the creek were less than 1-foot tall on either side, with a water depth of approximately 6-inches of less.

Tributary 3:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39:
Field Observation Eggers and Reed:
Soil Mapping Unit(s): 414-Hamel loam, 106C2-Lester loam, 239B-Le Sueur loam

Tributary 3 has two forks that flow through a non-wetland forest and slowly flow down into wetland 2 before flowing into tributary 1. This area is not a wetland because of the defined unvegetated bed and bank that is present in the channel. At this sample point, the tributary was 2-feet wide at top of bank, with an OHWM of approximately 3-feet across. Bank heights of the creek were approximately 1-foot tall on either side, with a water depth of approximately 6 inches or less.

Photo 10: View of Tributary 3

Drainage Feature 1:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39:
Field Observation Eggers and Reed:
Soil Mapping Unit(s): 109-Cordova clay loam

Photo 11: View of Drainage feature 1

Drainage Feature 2:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39:
Field Observation Eggers and Reed:
Soil Mapping Unit(s): 109-Cordova clay loam

Photo 12: View of drainage feature 2

Infiltration Basin:
NWI Cowardin: None
PWI (Hydro) ID: None
Field Observation Circular 39: None
Field Observation Eggers and Reed: None
Soil Mapping Unit(s): 109-Cordova clay loam

This infiltration basin was built in 2016, originally on an upland location. The purpose of the basin was to provide stormwater treatment for improvements made to the water tower site.

Photo 13: Stormwater Pond looking east.

VI. CONCLUSION

The delineation was performed on June 2nd, 2021. The boundaries of the wetlands were staked in the field with three foot "Wetland Delineation" pin flags. The location of the pin flags was surveyed by Bolton & Menk, Inc. using a Trimble Geo-XH GPS Data Collector and tied to the Le Sueur County coordinate system. The delineated limits are believed to be the upper limits of where all three of the required wetland criteria were present.

Bolton & Menk, Inc., was asked to determine the boundaries of those jurisdictional wetlands that exist upon this property as defined by the Wetland Conservation Act.

Based upon all available information, the existing conditions that currently prevail, and the on-site investigation, evidence supports the presence of three wetland complexes and three tributaries found within the boundaries of the study area.

WETLAND SUMMARY

Id #	Wetland Type^	Size*
W1	Type 1 (Seasonally Flooded Basin)	0.44 ac
W7	Type 2 (Fresh (wet) Meadow)	0.88 ac
W7	Type 7 (Wooded Swamp)	4.35 ac
W8	Type 2 (Fresh (wet) Meadow)	0.46 ac
Total:		**6.13 ac**

**size measured within study area.*
^wetland type within study area

Sincerely,
BOLTON & MENK, INC.

Dan Donayre
Certified Wetland Delineator, No. 1191

APPENDIX

Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

Exhibit A: Location Map

June 2021

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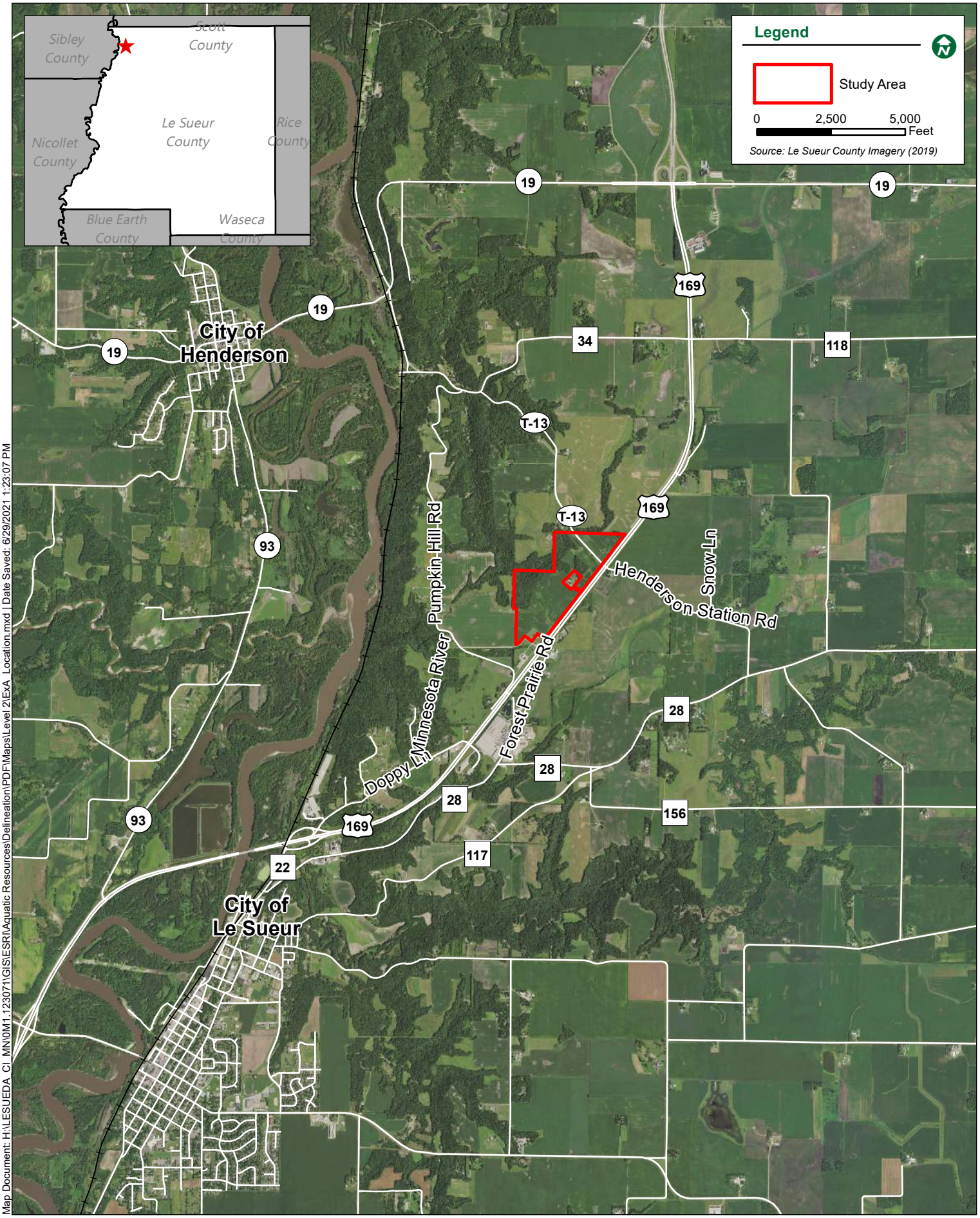

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Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

Exhibit B: 2-Foot LiDAR Contours Map

June 2021

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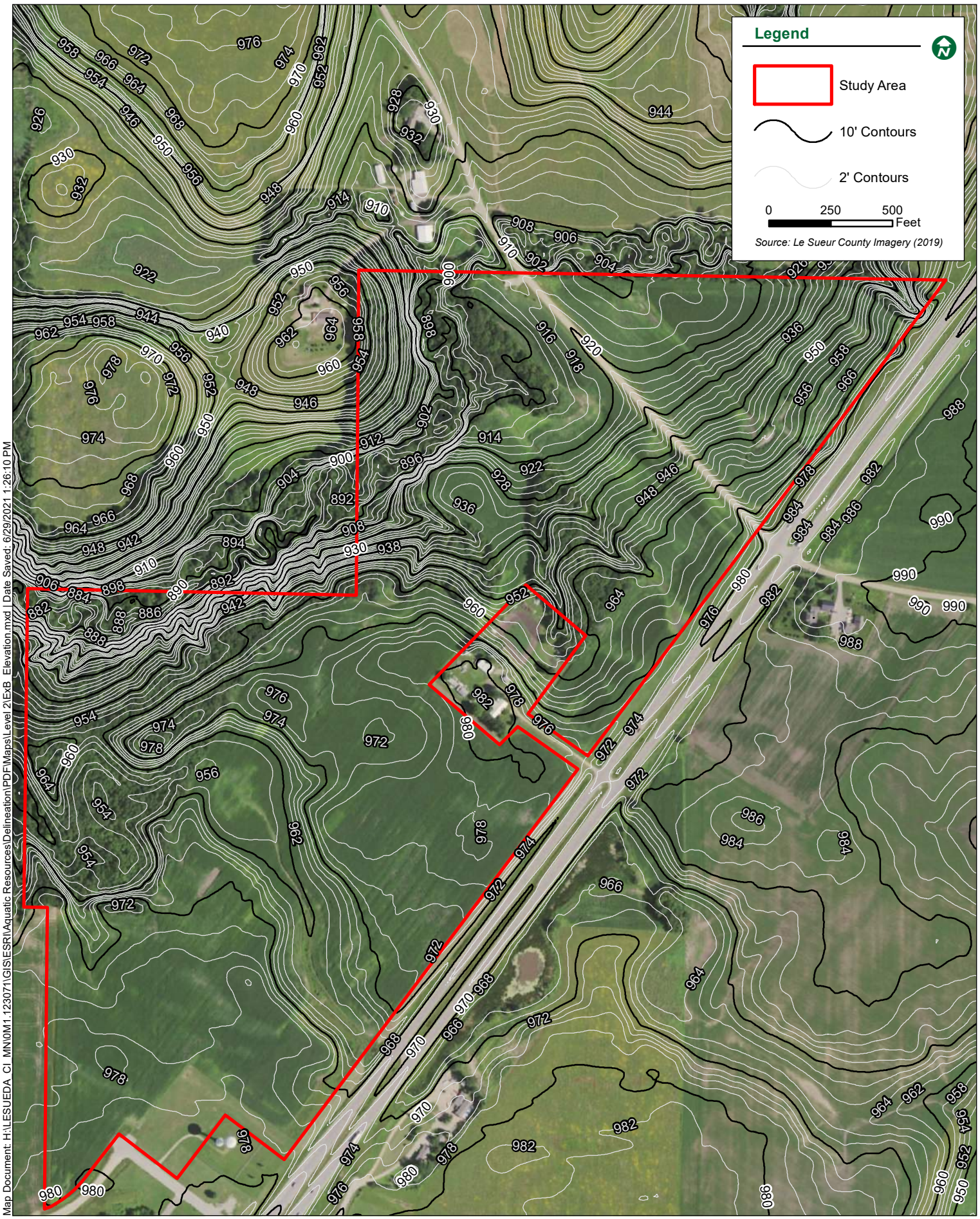

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Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

Exhibit C: National Wetlands Inventory Map

June 2021

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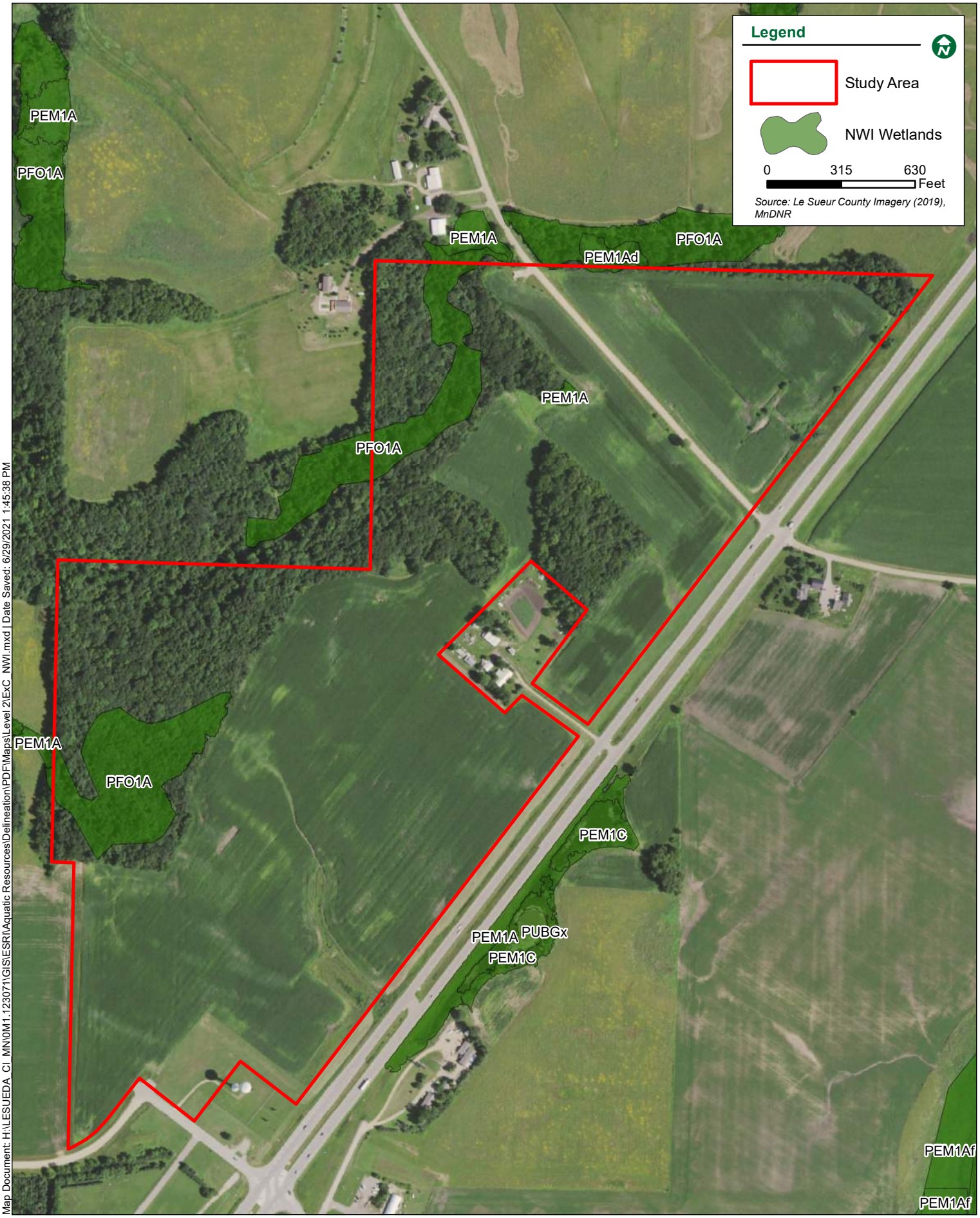

Map Document: H:\LESUEDA_CI_MN\0M1.123071\GIS\ESRI\Aquatic Resources\Delineation\PDFMaps\Level 2\ExC_NWI.mxd | Date Saved: 6/29/2021 1:45:38 PM

Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

Exhibit D: Public Waters Inventory Map

June 2021

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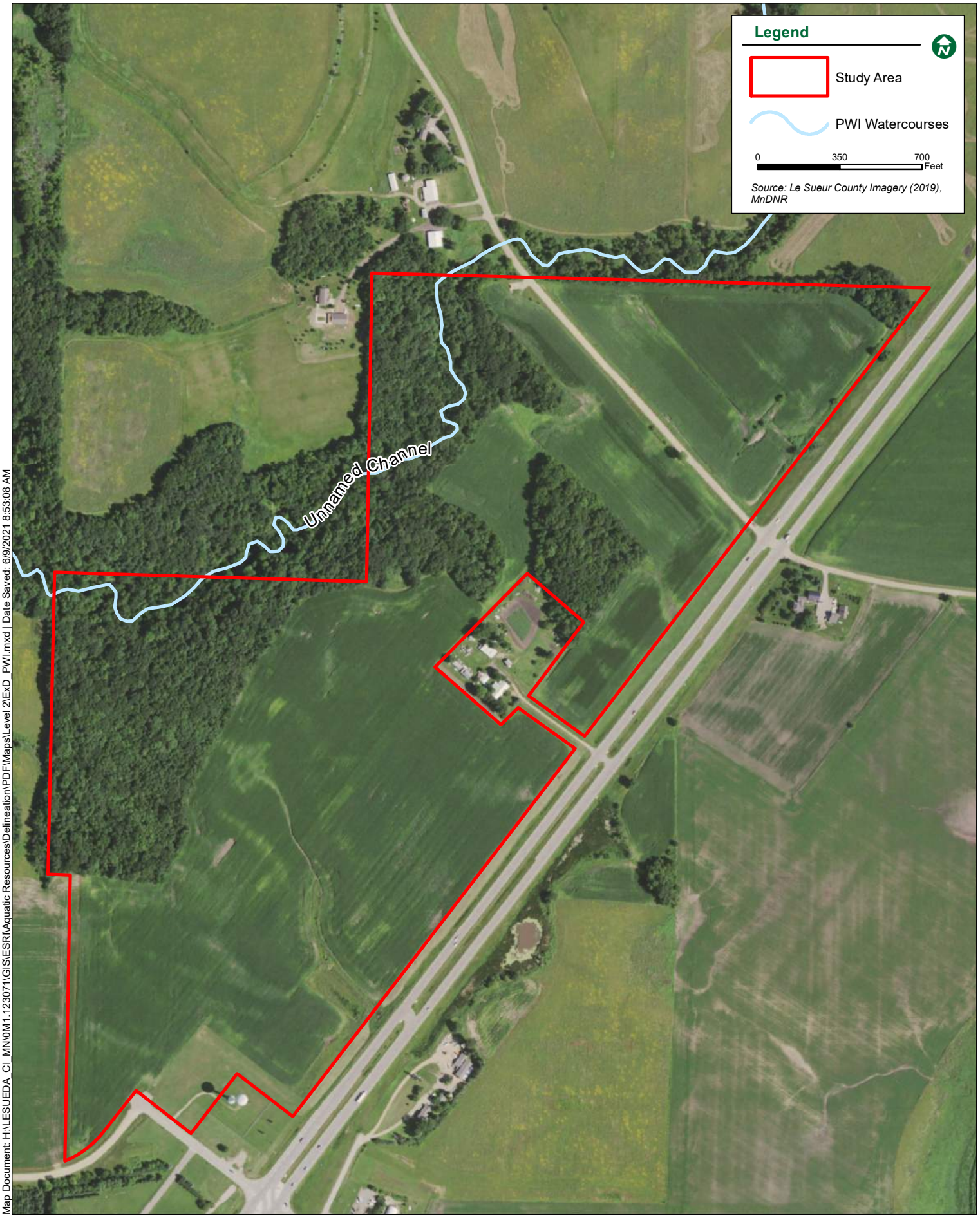

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Exhibit E: Faribault County Soil Survey Map

June 2021

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Symbol	Name	Slopes	Hydric Rating	Hydric Class
106C2	Lester loam	6-10%	No	2%
945F	Lester-Belview complex	22-40%	No	0%
414	Hamel loam	0-2%	Yes	90%
468	Otter silt loam	0-2%	Yes	100%
109	Cordova clay loam	0-2%	Yes	90%
106D2	Lester loam	10-16%	No	0%
123	Dundas silt loam	0-2%	Yes	90%
239B	Le Sueur loam	1-3%	No	15%
463	Minneiska fine sandy loam	0-2%	No	5%

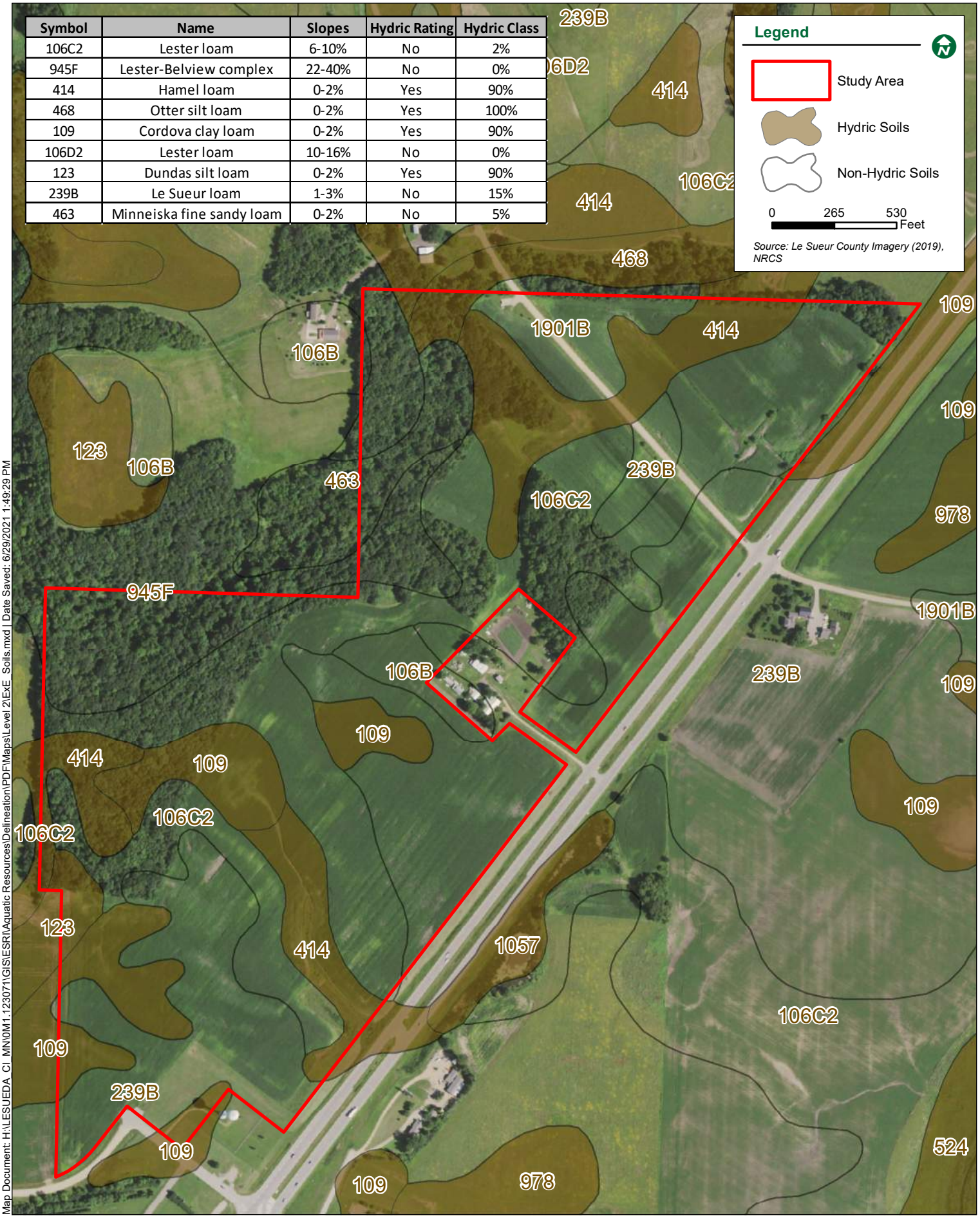

Exhibit F:Delineation Map

June 2021

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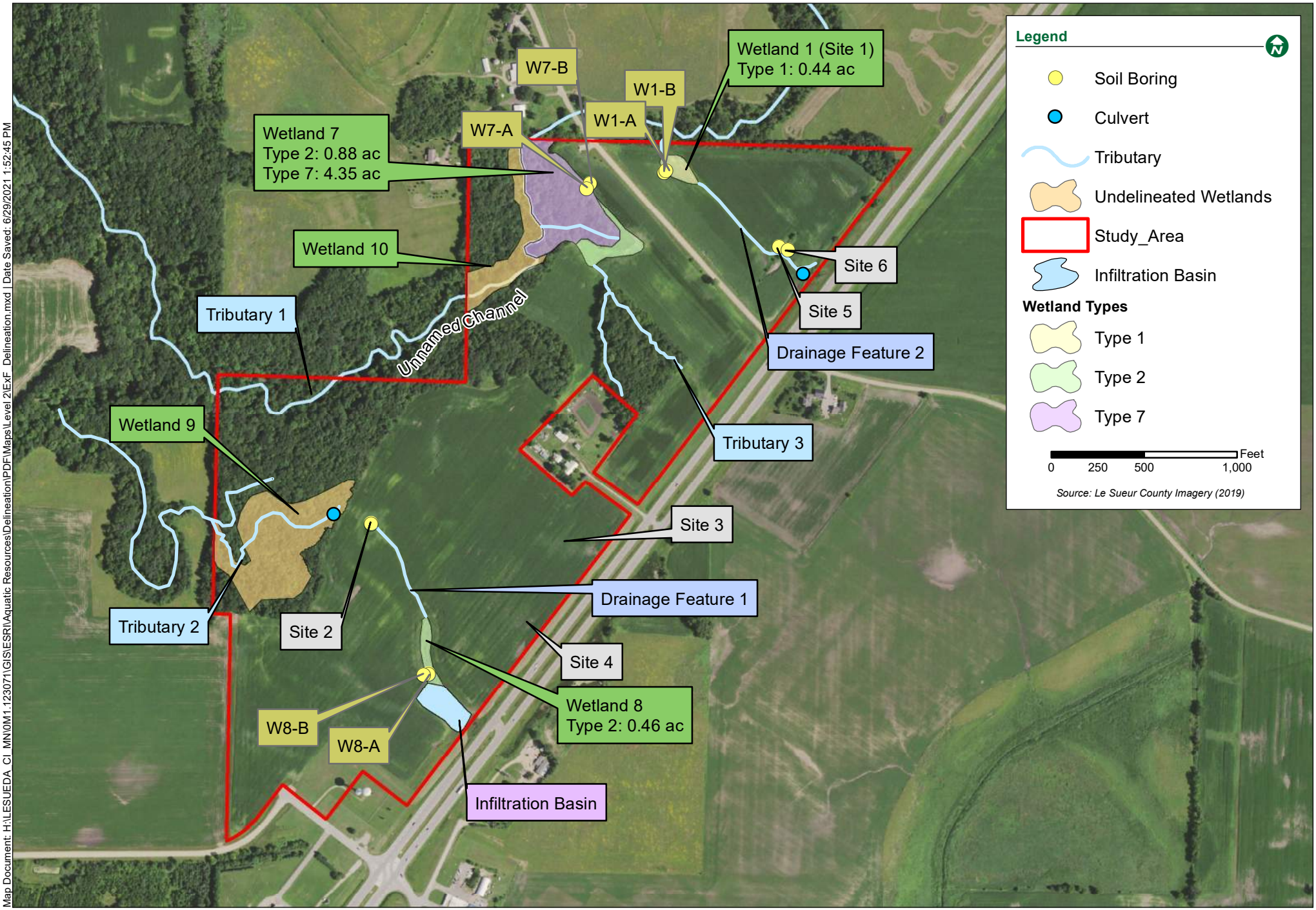

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **W1-A**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Basin/toeslope** Local Relief (concave, convex, none): **Concave**

Slope (%): **0-2%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **414-Hamel Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**Yes**
Hydric soils present?	**Yes**
Wetland hydrology present?	**Yes**
Is the sampled area within a wetland?	**Yes**

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly disturbed by agriculture row crops.**

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 =Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet)			
1 **Acer negundo**	**2**	**Yes**	**FAC**
2			
3			
4			
5			
	2 =Total Cover		
Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**25**	**Yes**	**UPL**
2 **Cyperus esculentus**	**25**	**Yes**	**FACW**
3			
4			
5			
6			
7			
8			
9			
10			
	50 =Total Cover		
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW or FAC: **67%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**25**	x 2 =	**50**
FAC Species:	**2**	x 3 =	**6**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**25**	x 5 =	**125**
Totals:	**52** (A)		**181** (B)

Prevalence Index (B/A): **3.48**

Hydrophytic Vegetation Indicators

	Rapid test for hydrophytic vegetation
X	Dominance test >50%
	Prevalence index is ≤3.0*
	Morphological adaptations* (Provide supporting data in remarks)
X	Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **Yes**

Remarks: **The sample point was taken within row crops. Cyperus esculentus was found within the rows, indicating hydrophytic vegetation may have once developed here.**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **W1-A**

SOILS

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	**10YR 2/1**	**100**					**Clay Loam**	
10-24+	**10YR 5/1**	**100**					**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)
- **X** Depleted Below Dark Surface (A11)
- **X** Thick Dark Surface (A12)
- ___ Sandy Mucky Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **Yes**

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 or Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two require

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

Field Observations:

Surface Water Present?	**No**	Depth (inches):	
Water Table Present?	**No**	Depth (inches):	
Saturation Present?	**No**	Depth (inches):	

Indicators of Wetland Hydrology Present? **Yes**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **W7-A**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Toeslope** Local Relief (concave, convex, none): **Concave**

Slope (%): **0-2%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **414-Hamel Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**Yes**	**Is the sampled area within a wetland?** **Yes**
Hydric soils present?	**Yes**	
Wetland hydrology present?	**Yes**	

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly distrubed by agriculutre row crops.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1 **Acer negundo**	**5**	**Yes**	**FAC**
2			
3			
4			
5			
	5 =Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet)			
1			
2			
3			
4			
5			
	0 =Total Cover		
Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**25**	**Yes**	**UPL**
2 **Cyperus esculentus**	**10**	**Yes**	**FACW**
3			
4			
5			
6			
7			
8			
9			
10			
	35 =Total Cover		
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW or FAC: **67%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**10**	x 2 =	**20**
FAC Species:	**5**	x 3 =	**15**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**25**	x 5 =	**125**
Totals:	**40** (A)		**160** (B)

Prevalence Index (B/A): **4.00**

Hydrophytic Vegetation Indicators

- Rapid test for hydrophytic vegetation
- **X** Dominance test >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (Provide supporting data in remarks)
- **X** Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **Yes**

Remarks: **Row crops planted. To south at same elevation Phalaris arundinacea dominated off of the agricultural field. This indicated that hydrophytic vegetation may have existed at the sample point historically.**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **W7-B**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Footslope** Local Relief (concave, convex, none): **Linear**

Slope (%): **2-6%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **414-Hamel Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**No**	**Is the sampled area within a wetland?** **No**
Hydric soils present?	**Yes**	
Wetland hydrology present?	**No**	

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly distrubed by agriculutre row crops.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 =Total Cover		

Sapling/Shrub stratum (Plot size: 15 feet)			
1			
2			
3			
4			
5			
	0 =Total Cover		

Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**25**	**Yes**	**UPL**
2			
3			
4			
5			
6			
7			
8			
9			
10			
	25 =Total Cover		

Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **0** (A)

Total number of dominant species across all strata: **1** (B)

Percent of dominant species that are OBL, FACW or FAC: **0%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**0**	x 2 =	**0**
FAC Species:	**0**	x 3 =	**0**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**25**	x 5 =	**125**
Totals:	**25** (A)		**125** (B)

Prevalence Index (B/A): **5.00**

Hydrophytic Vegetation Indicators

- Rapid test for hydrophytic vegetation
- Dominance test >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (Provide supporting data in remarks)
- **X** Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **No**

Remarks: **Row crops planted and no indicator of hydrophytic vegetation at sample point elevation observed.**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **W7-B**

SOILS

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**		
0-40	**10YR 2/1**	**100**					**Clay Loam**	
40-46+	**10YR 5/1**	**95**	**7.5YR 4/6**	**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)
- **X** Thick Dark Surface (A12)
- ___ Sandy Mucky Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **Yes**

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 or Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Crack (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?	**No**	Depth (inches):	
Water Table Present?	**No**	Depth (inches):	
Saturation Present?	**No**	Depth (inches):	

Indicators of Wetland Hydrology Present? **No**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **W8-A**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Toeslope** Local Relief (concave, convex, none): **Concave**

Slope (%): **0-2%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **414-Hamel Loam** NWI Classification: **None**

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

Are vegetation ____, soils ____, or hydrology ____ significantly disturbed? Are normal circumstances present? **Yes**

Are vegetation ____, soils ____, or hydrology ____ naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**Yes**	**Is the sampled area within a wetland?** **Yes**
Hydric soils present?	**Yes**	
Wetland hydrology present?	**Yes**	

Remarks: **Antecedent precipitation was above normal during the site visit.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	=Total Cover	
Sapling/Shrub stratum (Plot size: 15 feet)			
1 **Salix amygdaloides**	**5**	**Yes**	**FACW**
2			
3			
4			
5			
	5	=Total Cover	
Herb stratum: (Plot size: 5 feet)			
1 **Carex stipata**	**35**	**Yes**	**OBL**
2 **Phalaris arundinacea**	**30**	**Yes**	**FACW**
3 **Solidago gigantea**	**25**	**Yes**	**FACW**
4 **Iris virginica**	**15**	**No**	**OBL**
5			
6			
7			
8			
9			
10			
	105	=Total Cover	
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0	=Total Cover	

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **4** (A)

Total number of dominant species across all strata: **4** (B)

Percent of dominant species that are OBL, FACW or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**50**	x 1 =	**50**
FACW Species:	**60**	x 2 =	**120**
FAC Species:	**0**	x 3 =	**0**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**0**	x 5 =	**0**
Totals:	**110** (A)		**170** (B)

Prevalence Index (B/A): **1.55**

Hydrophytic Vegetation Indicators

- **X** Rapid test for hydrophytic vegetation
- **X** Dominance test >50%
- **X** Prevalence index is ≤3.0*
- ____ Morphological adaptations* (Provide supporting data in remarks)
- ____ Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **Yes**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **W8-A**

SOILS

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	**10YR 3/1**	**100**					**Silt Loam**	
15-28+	**10YR 2/1**	**95**	**7.5YR 4/6**	**5**	**C**	**M**	**Silt 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)
- **X** Thick Dark Surface (A12)
- ___ Sandy Mucky Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- **X** Surface Soil Crack (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?	**No**	Depth (inches):	
Water Table Present?	**Yes**	Depth (inches):	**20**
Saturation Present?	**Yes**	Depth (inches):	**10**

Indicators of Wetland Hydrology Present? **Yes**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **W8-B**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Footslope** Local Relief (concave, convex, none): **Concave**

Slope (%): **5%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **106C2-Lester Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**No**
Hydric soils present?	**No**
Wetland hydrology present?	**No**
Is the sampled area within a wetland?	**No**

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly distrubed by agriculutre row crops.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 =Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet)			
1			
2			
3			
4			
5			
	0 =Total Cover		
Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**35**		**UPL**
2			
3			
4			
5			
6			
7			
8			
9			
10			
	35 =Total Cover		
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: (A)

Total number of dominant species across all strata: (B)

Percent of dominant species that are OBL, FACW or FAC: **0%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**0**	x 2 =	**0**
FAC Species:	**0**	x 3 =	**0**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**35**	x 5 =	**175**
Totals:	**35** (A)		**175** (B)

Prevalence Index (B/A): **5.00**

Hydrophytic Vegetation Indicators

- Rapid test for hydrophytic vegetation
- Dominance test >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (Provide supporting data in remarks)
- **X** Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **No**

Remarks: **Row crops planted and no indiciation of hydrophytic vegetation at sample point elevation.**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **W8-B**

SOILS

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	**10YR 3/2**	**100**					**Silty Clay**	
18-32+	**10YR 2/1**	**100**					**Silty Clay**	

*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 Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Crack (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?	**No**	Depth (inches):	
Water Table Present?	**Yes**	Depth (inches):	**26**
Saturation Present?	**Yes**	Depth (inches):	**22**

Indicators of Wetland Hydrology Present? **No**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **W1-B**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Footslope/backslope edge** Local Relief (concave, convex, none): **Linear**

Slope (%): **2-4%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **414-Hamel Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**No**	**Is the sampled area within a wetland?** **No**
Hydric soils present?	**Yes**	
Wetland hydrology present?	**No**	

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly disturbed by agriculture row crops.**

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 =Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet)			
1 **Acer negundo**	**5**	**Yes**	**FAC**
2			
3			
4			
5			
	5 =Total Cover		
Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**25**	**Yes**	**UPL**
2 **Chenopodium album**	**5**	**No**	**FACU**
3			
4			
5			
6			
7			
8			
9			
10			
	30 =Total Cover		
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **1** (A)

Total number of dominant species across all strata: **2** (B)

Percent of dominant species that are OBL, FACW or FAC: **50%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**0**	x 2 =	**0**
FAC Species:	**5**	x 3 =	**15**
FACU species:	**5**	x 4 =	**20**
UPL Species:	**25**	x 5 =	**125**
Totals:	**35** (A)		**160** (B)

Prevalence Index (B/A): **4.57**

Hydrophytic Vegetation Indicators

- Rapid test for hydrophytic vegetation
- **X** Dominance test >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (Provide supporting data in remarks)
- Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **No**

Remarks: **No hydrophytic speices within rows.**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **W1-B**

SOILS

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	**10YR 2/1**	**100**					**Clay Loam**	
10-24+	**10YR 5/1**	**100**					**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)
- **X** Depleted Below Dark Surface (A11)
- **X** Thick Dark Surface (A12)
- ___ Sandy Mucky Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **Yes**

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 or Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- **X** Surface Soil Crack (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?	**No**	Depth (inches): _____
Water Table Present?	**No**	Depth (inches): _____
Saturation Present?	**No**	Depth (inches): _____

Indicators of Wetland Hydrology Present? **No**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **Site 2**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Footslope** Local Relief (concave, convex, none): **Concave**

Slope (%): **0-5%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **123-Dundas silt loam** NWI Classification: **None**

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

Are vegetation ____, soils ____, or hydrology ____ significantly disturbed? Are normal circumstances present? **Yes**

Are vegetation ____, soils ____, or hydrology ____ naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**Yes**
Hydric soils present?	**Yes**
Wetland hydrology present?	**No**
Is the sampled area within a wetland?	**No**

Remarks: **Antecedent precipitation was above normal during the site visit.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	=Total Cover	
Sapling/Shrub stratum (Plot size: 15 feet)			
1 **Acer negundo**	**25**	**Yes**	**FAC**
2 **Populus deltoides**	**15**	**Yes**	**FAC**
3			
4			
5			
	40	=Total Cover	
Herb stratum: (Plot size: 5 feet)			
1 **Solidago gigantea**	**60**	**Yes**	**FACW**
2 **Phalaris arundinacea**	**25**	**Yes**	**FACW**
3 **Taraxacum officinale**	**15**	**No**	**FACU**
4 **Achillea millefolium**	**10**	**No**	**FACU**
5 **Plantago major**	**5**	**No**	**FAC**
6			
7			
8			
9			
10			
	115	=Total Cover	
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0	=Total Cover	

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **4** (A)

Total number of dominant species across all strata: **4** (B)

Percent of dominant species that are OBL, FACW or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**85**	x 2 =	**170**
FAC Species:	**40**	x 3 =	**120**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**0**	x 5 =	**0**
Totals:	**125** (A)		**290** (B)

Prevalence Index (B/A): **2.32**

Hydrophytic Vegetation Indicators

	Rapid test for hydrophytic vegetation
X	Dominance test >50%
X	Prevalence index is ≤3.0*
	Morphological adaptations* (Provide supporting data in remarks)
	Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **Yes**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **Site 2**

SOILS

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**		
0-19	**10YR 2/1**	**100**					**Clay Loam**	
19-29	**10YR 3/2**	**100**					**Silty Clay**	
29-48+	**1-YR 2/2**	**90**	**7.5YR 4/6**	**10**	**C**	**M**	**Silty Clay**	

*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)
- **X** Thick Dark Surface (A12)
- ___ Sandy Mucky Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **Yes**

Remarks: **More depleted the deeper down. 48in is the start of the transition zone.**

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 or Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Crack (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?	**No**	Depth (inches):	
Water Table Present?	**No**	Depth (inches):	
Saturation Present?	**No**	Depth (inches):	

Indicators of Wetland Hydrology Present? **No**

Remarks: **No geomorphic position**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **Site 5**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Hillside** Local Relief (concave, convex, none): **Linear**

Slope (%): **0-2%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **106C2-Lester Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**Yes**	**Is the sampled area within a wetland?** **No**
Hydric soils present?	**No**	
Wetland hydrology present?	**Yes**	

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly distrubed by agriculutre row crops.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 =Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet)			
1 **Acer negundo**	**10**	**Yes**	**FAC**
2			
3			
4			
5			
	10 =Total Cover		
Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**30**	**Yes**	**UPL**
2 **Cyperus esculentus**	**10**	**Yes**	**FACW**
3 **Amaranthus retroflexus**	**10**	**Yes**	**FACU**
4			
5			
6			
7			
8			
9			
10			
	50 =Total Cover		
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **4** (B)

Percent of dominant species that are OBL, FACW or FAC: **50%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**10**	x 2 =	**20**
FAC Species:	**10**	x 3 =	**30**
FACU species:	**10**	x 4 =	**40**
UPL Species:	**30**	x 5 =	**150**
Totals:	**60** (A)		**240** (B)

Prevalence Index (B/A): **4.00**

Hydrophytic Vegetation Indicators

- Rapid test for hydrophytic vegetation
- Dominance test >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (Provide supporting data in remarks)
- **X** Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **Yes**

Remarks: **Row crops planted with some hydric vegetation volunteers**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **Site 5**

SOILS

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	**10YR 2/1**	**100**					**Clay**	
10-24	**10YR 5/3**	**85**	**7.5YR 4/6**	**15**	**C**	**M**	**Clay**	

*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 Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	**No**	Depth (inches): _____
Water Table Present?	**No**	Depth (inches): _____
Saturation Present?	**No**	Depth (inches): _____

Indicators of Wetland Hydrology Present? **Yes**

Remarks:

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **Site 6**

Investigator(s): **Addeline Theis & Dan Donayre** Section, Township, Range: **Sec 17, T112N, R25W**

Landforms (hillside, terrace, etc.): **Footslope** Local Relief (concave, convex, none): **Concave**

Slope (%): **0-2%** Latitude: Longitude: Datum: **Le Sueur**

Soil Map Unit Name: **106C2-Lester Loam** NWI Classification: **None**

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

Are vegetation **X**, soils , or hydrology significantly disturbed? Are normal circumstances present? **No**

Are vegetation , soils , or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	**Yes**	**Is the sampled area within a wetland?** **No**
Hydric soils present?	**No**	
Wetland hydrology present?	**Yes**	

Remarks: **Antecedent precipitation was above normal during the site visit. Vegetation is signficantly distrubed by agriculutre row crops.**

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 =Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet)			
1			
2			
3			
4			
5			
	0 =Total Cover		
Herb stratum: (Plot size: 5 feet)			
1 **Zea mays**	**25**	**Yes**	**UPL**
2 **Amaranthus retroflexus**	**15**	**Yes**	**FACW**
3			
4			
5			
6			
7			
8			
9			
10			
	40 =Total Cover		
Woody vine stratum: (Plot size: 15 feet)			
1			
2			
	0 =Total Cover		

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: **1** (A)

Total number of dominant species across all strata: **2** (B)

Percent of dominant species that are OBL, FACW or FAC: **50%** (A/B)

Prevalence Index Worksheet

Total % cover of:

OBL Species:	**0**	x 1 =	**0**
FACW Species:	**15**	x 2 =	**30**
FAC Species:	**0**	x 3 =	**0**
FACU species:	**0**	x 4 =	**0**
UPL Species:	**25**	x 5 =	**125**
Totals:	**40** (A)		**155** (B)

Prevalence Index (B/A): **3.88**

Hydrophytic Vegetation Indicators

- Rapid test for hydrophytic vegetation
- Dominance test >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (Provide supporting data in remarks)
- **X** Problematic hydrophytic vegetation* (Explain in remarks)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? **Yes**

Remarks: **Row crops planted with some hydric vegetation volunteers**

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EXHIBIT G:
WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: **Site 6**

SOILS

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	**10YR 2/1**	**100**					**Clay**	
10-24	**10YR 5/3**	**85**	**7.5YR 4/6**	**15**	**C**	**M**	**Clay**	

*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 Material (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Material (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 Soils Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	**No**	Depth (inches):	
Water Table Present?	**Yes**	Depth (inches):	**24**
Saturation Present?	**Yes**	Depth (inches):	**18**

Indicators of Wetland Hydrology Present? **Yes**

Remarks:

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EXHIBIT G:
OTHER AQUATIC RESOURCES DATA FORM

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **Tributary 1**

Investigator(s): **Addeline Theis & Dan Donayre** Sec, Twp, Ran: **17, T112N, R25W** Associated WTL:

MN DNR ID - DNR Hydro ID: **124050**

WATERCOURSE ATTRIBUITES (Within project limits)

Watercourse Type: **Stream** Watercourse Depth

Flow Type: **Perennial** (inches): **0-12**

Watercourse Width (feet): Top of Bank (at sample location): **3**

Water Surface (at sample location): **2.5**

Watercourse is: **Natural** Subsurface flow? **Unknown**

OHWM Width at sample location (feet): **6**

OHWM Indicator (Check all applicable):

- [x] Natural line impressed on banks
- [ ] Changes in character of soil
- [x] Presence of litter or debris
- [x] Vegetation matted down, bent or absent
- [ ] Sediment sorting
- [ ] Scour
- [ ] Multiple observed flow events
- [ ] Water staining
- [x] Shelving
- [x] Litter disturbed or washed away
- [x] Destruction of terrestrial vegetation
- [x] Wracking
- [ ] Change in plant community
- [x] Deposition
- [x] Bed and bank

Bank Height (Downstream at sample location): Left: **0-2 feet** Right: **0-2 feet**

Watercourse substrate (Check all that apply)

- [x] Silts
- [ ] Concrete
- [ ] Cobbles
- [x] Muck
- [x] Gravel
- [ ] Bedrock
- [ ] Vegetation
- [x] Sands
- [ ] Other:

Aquatic habitats (check all that apply)

- [x] Sand bar
- [ ] Gravel bar
- [x] Mud bar
- [x] Undercut banks
- [ ] Gravel riffles
- [x] Deep pools
- [x] Bank root system
- [x] Overhanging trees/shrubs
- [ ] In-stream emergent plants
- [ ] In-stream submergent plants
- [x] Fringing wetlands

WATERBODY ATTRIBUTES (Within project limits)

Waterbody Type:

- [ ] Pond
- [ ] Lake
- [ ] Gravel Pit
- [ ] Other:

Waterbody depth: Subsurface flow?

Watercourse is:

OHWM Indicator (Check all applicable):

- [ ] Natural line impressed on banks
- [ ] Changes in character of soil
- [ ] Presence of liter or debris
- [ ] Vegetation matted down, bent, absent
- [ ] Sediment sorting
- [ ] Scour
- [ ] Multiple observed flow events
- [ ] Water staining
- [ ] Shelving
- [ ] Litter disturbed or washed away
- [ ] Destruction of terrestrial vegetation
- [ ] Wracking
- [ ] Change in plant community
- [ ] Deposition
- [ ] Bed and bank

Aquatic habitats (check all that apply)

- [ ] Sand bar
- [ ] Gravel bar
- [ ] Mud bar
- [ ] Undercut banks
- [ ] Gravel riffles
- [ ] Deep pools
- [ ] Bank root system
- [ ] Overhanging trees/shrubs
- [ ] In-stream emergent plants
- [ ] In-stream submergent plants
- [ ] Fringing wetlands

Shoreland type:

- [ ] Silts
- [ ] Concrete
- [ ] Cobbles
- [ ] Muck
- [ ] Gravel
- [ ] Bedrock
- [ ] Vegetation
- [ ] Sands
- [ ] Other:

Comments:

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EXHIBIT G:
OTHER AQUATIC RESOURCES DATA FORM

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **Tributary 2**

Investigator(s): **Addeline Theis & Dan Donayre** Sec, Twp, Ran: **17, T112N, R25W** Associated WTL:

MN DNR ID - DNR Hydro ID:

WATERCOURSE ATTRIBUITES (Within project limits)

Watercourse Type: **Stream** Watercourse Depth

Flow Type: **Seasonal** (inches): **0-6**

Watercourse Width (feet): Top of Bank (at sample location): **1ft**

Water Surface (at sample location): **1/2 ft**

Watercourse is: **Manipulated** Subsurface flow? **Unknown**

OHWM Width at sample location (feet): **5ft**

OHWM Indicator (Check all applicable):

- [x] Natural line impressed on banks
- [ ] Changes in character of soil
- [x] Presence of litter or debris
- [ ] Vegetation matted down, bent or absent
- [ ] Sediment sorting
- [ ] Scour
- [ ] Multiple observed flow events
- [ ] Water staining
- [x] Shelving
- [ ] Litter disturbed or washed away
- [ ] Destruction of terrestrial vegetation
- [ ] Wracking
- [ ] Change in plant community
- [x] Deposition
- [x] Bed and bank

Bank Height (Downstream at sample location):

Left: **0-2 feet**

Right: **0-2 feet**

Watercourse substrate (Check all that apply)

- [x] Silts
- [ ] Concrete
- [ ] Cobbles
- [x] Muck
- [ ] Gravel
- [ ] Bedrock
- [ ] Vegetation
- [ ] Sands
- [ ] Other:

Aquatic habitats (check all that apply)

- [x] Sand bar
- [ ] Gravel bar
- [ ] Mud bar
- [ ] Undercut banks
- [ ] Gravel riffles
- [ ] Deep pools
- [ ] Bank root system
- [x] Overhanging trees/shrubs
- [ ] In-stream emergent plants
- [ ] In-stream submergent plants
- [ ] Fringing wetlands

WATERBODY ATTRIBUTES (Within project limits)

Waterbody Type:

- [ ] Pond
- [ ] Lake
- [ ] Gravel Pit
- [ ] Other:

Waterbody depth: Subsurface flow?

Watercourse is:

OHWM Indicator (Check all applicable):

- [ ] Natural line impressed on banks
- [ ] Changes in character of soil
- [ ] Presence of liter or debris
- [ ] Vegetation matted down, bent, absent
- [ ] Sediment sorting
- [ ] Scour
- [ ] Multiple observed flow events
- [ ] Water staining
- [ ] Shelving
- [ ] Litter disturbed or washed away
- [ ] Destruction of terrestrial vegetation
- [ ] Wracking
- [ ] Change in plant community
- [ ] Deposition
- [ ] Bed and bank

Aquatic habitats (check all that apply)

- [ ] Sand bar
- [ ] Gravel bar
- [ ] Mud bar
- [ ] Undercut banks
- [ ] Gravel riffles
- [ ] Deep pools
- [ ] Bank root system
- [ ] Overhanging trees/shrubs
- [ ] In-stream emergent plants
- [ ] In-stream submergent plants
- [ ] Fringing wetlands

Shoreland type:

- [ ] Silts
- [ ] Concrete
- [ ] Cobbles
- [ ] Muck
- [ ] Gravel
- [ ] Bedrock
- [ ] Vegetation
- [ ] Sands
- [ ] Other:

Comments:

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EXHIBIT G:
OTHER AQUATIC RESOURCES DATA FORM

Project/Site: **Le Sueur EDA Project** City/County: **Le Sueur/ Le Sueur** Sampling Date: **6/2/2021**

Applicant/Owner: **Le Sueur Economic Development Authority** State: **Minnesota** Sample Point: **Tributary 3**

Investigator(s): **Addeline Theis & Dan Donayre** Sec, Twp, Ran: **17, T112N, R25W** Associated WTL:

MN DNR ID - DNR Hydro ID:

WATERCOURSE ATTRIBUITES (Within project limits)

Watercourse Type: **Stream** Watercourse Depth

Flow Type: **Seasonal** (inches): **0-3**

Watercourse Width (feet): Top of Bank (at sample location): **2ft**

Water Surface (at sample location): **1ft**

Watercourse is: **Natural** Subsurface flow? **Unknown**

OHWM Width at sample location (feet): **3ft**

OHWM Indicator (Check all applicable):

- [x] Natural line impressed on banks
- [ ] Changes in character of soil
- [x] Presence of litter or debris
- [ ] Vegetation matted down, bent or absent
- [ ] Sediment sorting
- [ ] Scour
- [ ] Multiple observed flow events
- [ ] Water staining
- [x] Shelving
- [x] Litter disturbed or washed away
- [ ] Destruction of terrestrial vegetation
- [x] Wracking
- [x] Change in plant community
- [x] Deposition
- [x] Bed and bank

Bank Height (Downstream at sample location): Left: **0-2 feet** Right: **0-2 feet**

Watercourse substrate (Check all that apply)

- [x] Silts
- [ ] Concrete
- [ ] Cobbles
- [x] Muck
- [ ] Gravel
- [ ] Bedrock
- [ ] Vegetation
- [x] Sands
- [ ] Other:

Aquatic habitats (check all that apply)

- [x] Sand bar
- [ ] Gravel bar
- [x] Mud bar
- [ ] Undercut banks
- [ ] Gravel riffles
- [ ] Deep pools
- [x] Bank root system
- [x] Overhanging trees/shrubs
- [ ] In-stream emergent plants
- [ ] In-stream submergent plants
- [ ] Fringing wetlands

WATERBODY ATTRIBUTES (Within project limits)

Waterbody Type:

- [ ] Pond
- [ ] Lake
- [ ] Gravel Pit
- [ ] Other:

Waterbody depth: Subsurface flow?

Watercourse is:

OHWM Indicator (Check all applicable):

- [ ] Natural line impressed on banks
- [ ] Changes in character of soil
- [ ] Presence of liter or debris
- [ ] Vegetation matted down, bent, absent
- [ ] Sediment sorting
- [ ] Scour
- [ ] Multiple observed flow events
- [ ] Water staining
- [ ] Shelving
- [ ] Litter disturbed or washed away
- [ ] Destruction of terrestrial vegetation
- [ ] Wracking
- [ ] Change in plant community
- [ ] Deposition
- [ ] Bed and bank

Aquatic habitats (check all that apply)

- [ ] Sand bar
- [ ] Gravel bar
- [ ] Mud bar
- [ ] Undercut banks
- [ ] Gravel riffles
- [ ] Deep pools
- [ ] Bank root system
- [ ] Overhanging trees/shrubs
- [ ] In-stream emergent plants
- [ ] In-stream submergent plants
- [ ] Fringing wetlands

Shoreland type:

- [ ] Silts
- [ ] Concrete
- [ ] Cobbles
- [ ] Muck
- [ ] Gravel
- [ ] Bedrock
- [ ] Vegetation
- [ ] Sands
- [ ] Other:

Comments:

Exhibit H-1: Historical Imagery 1938-1980

June 2021

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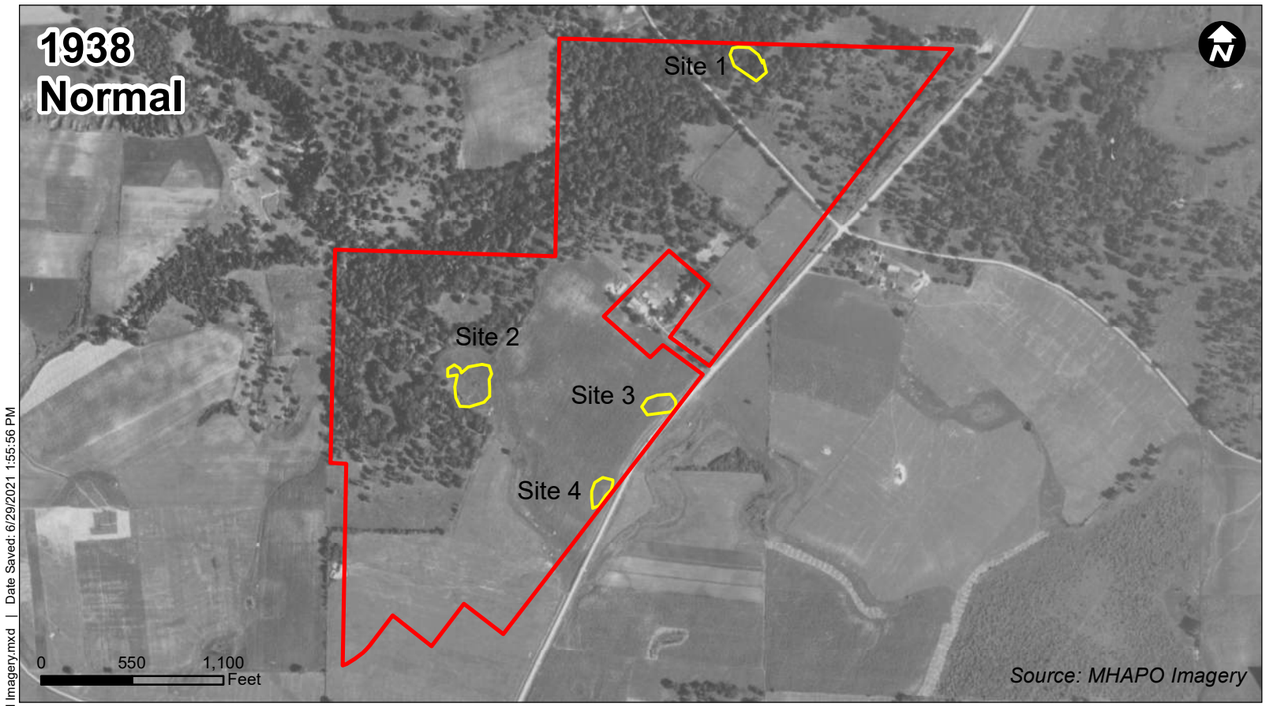

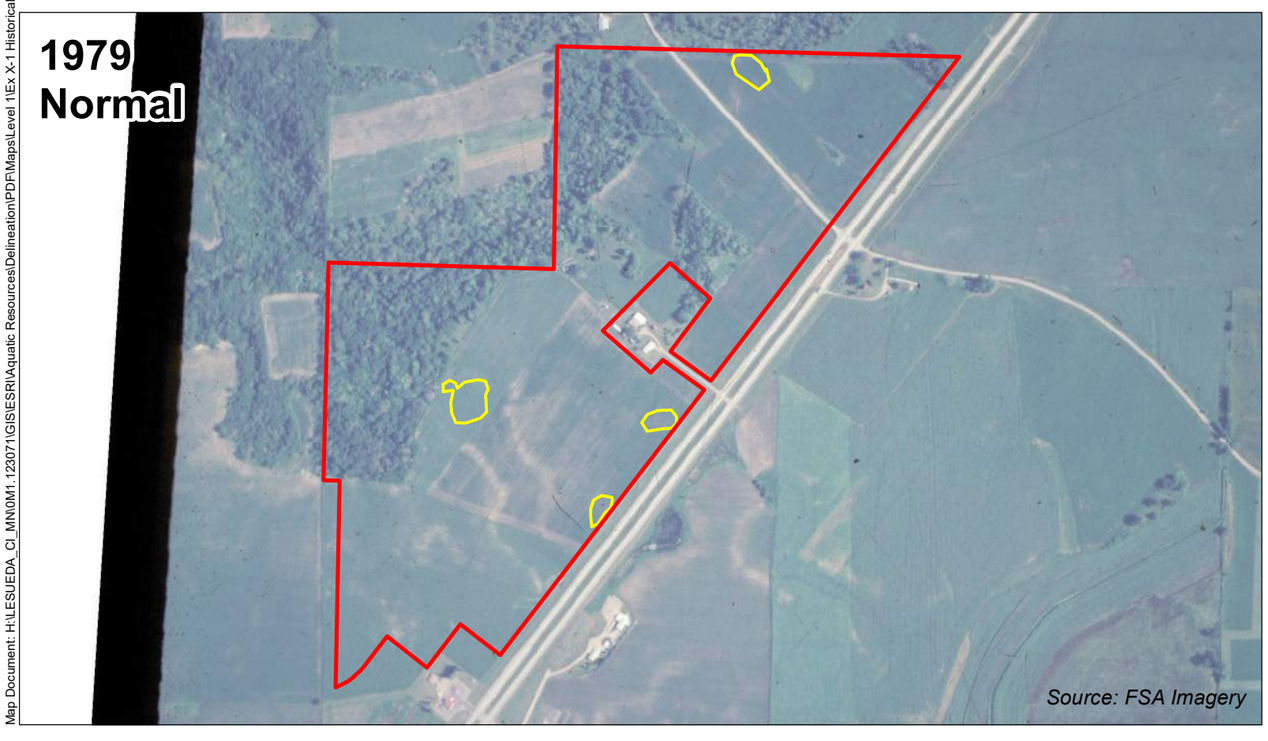

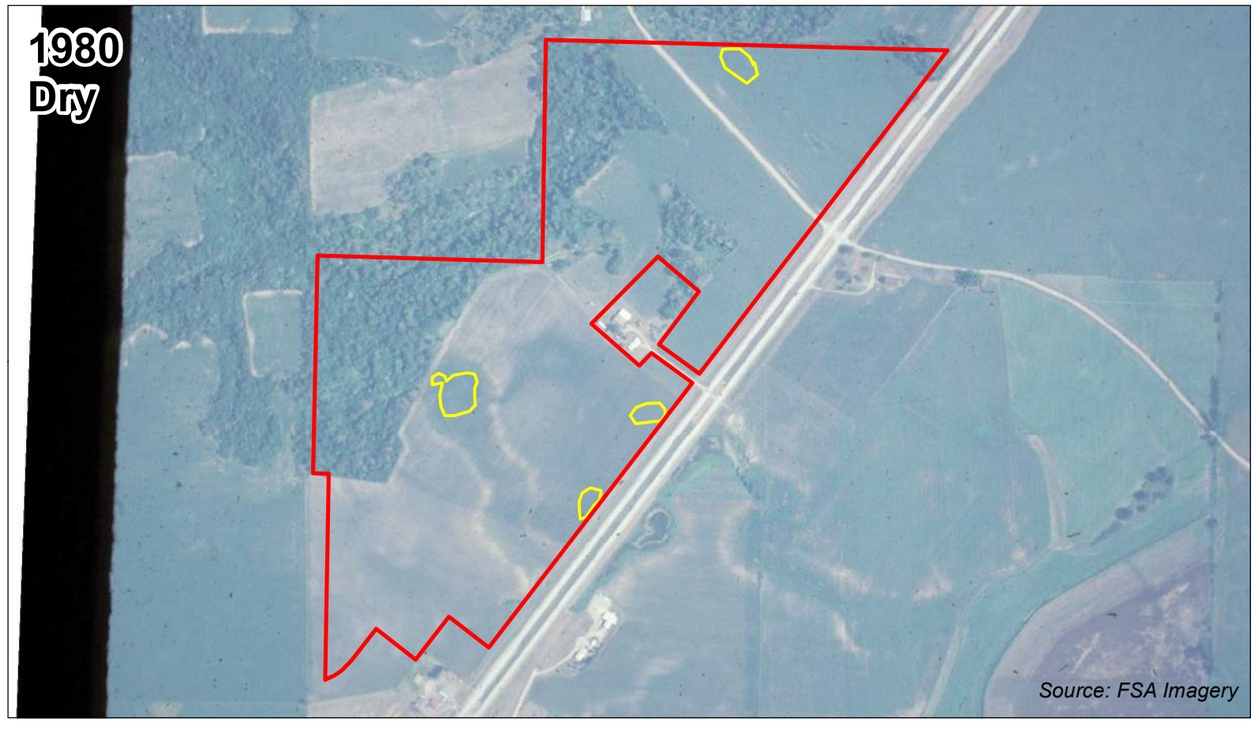

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Exhibit H-2: Historical Imagery 1981-1987

June 2021

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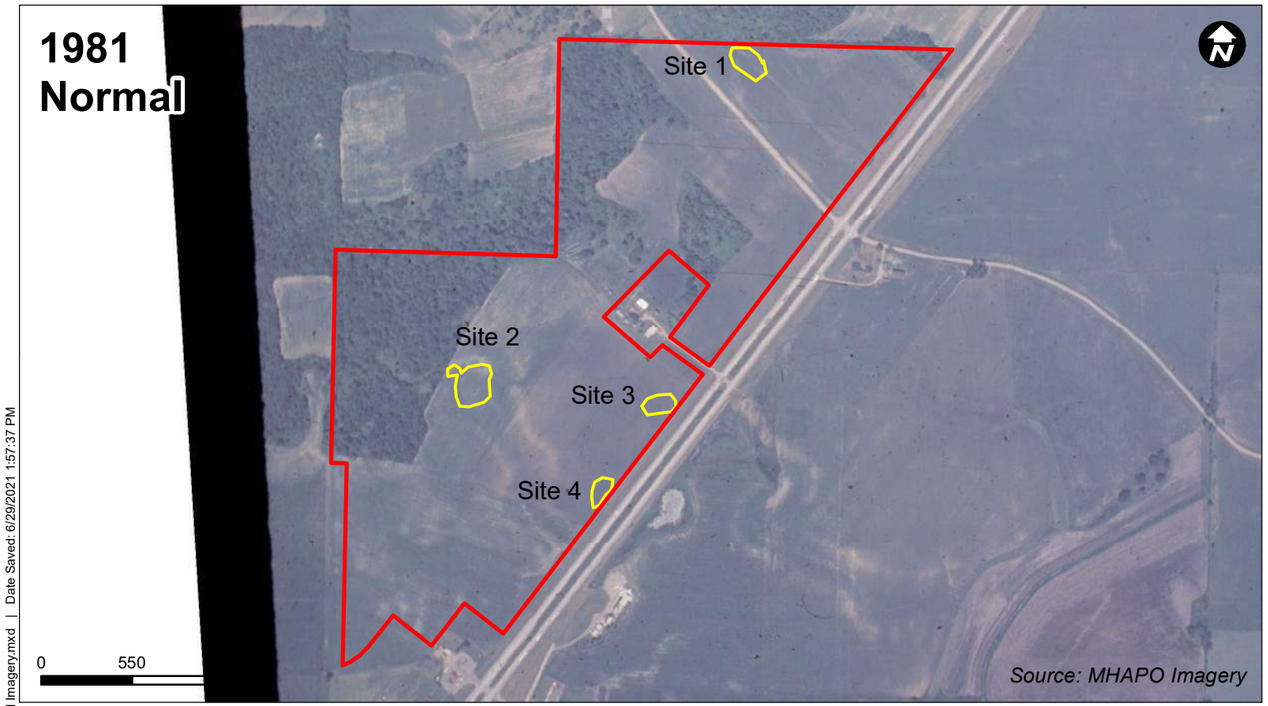

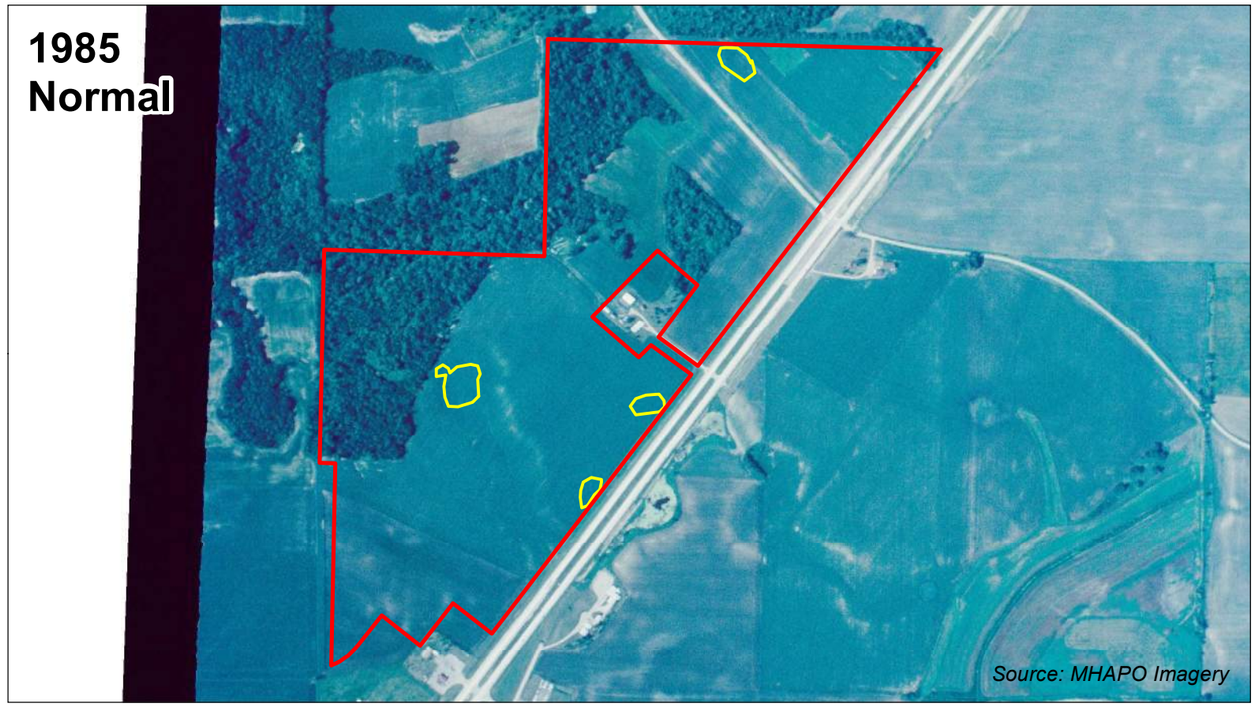

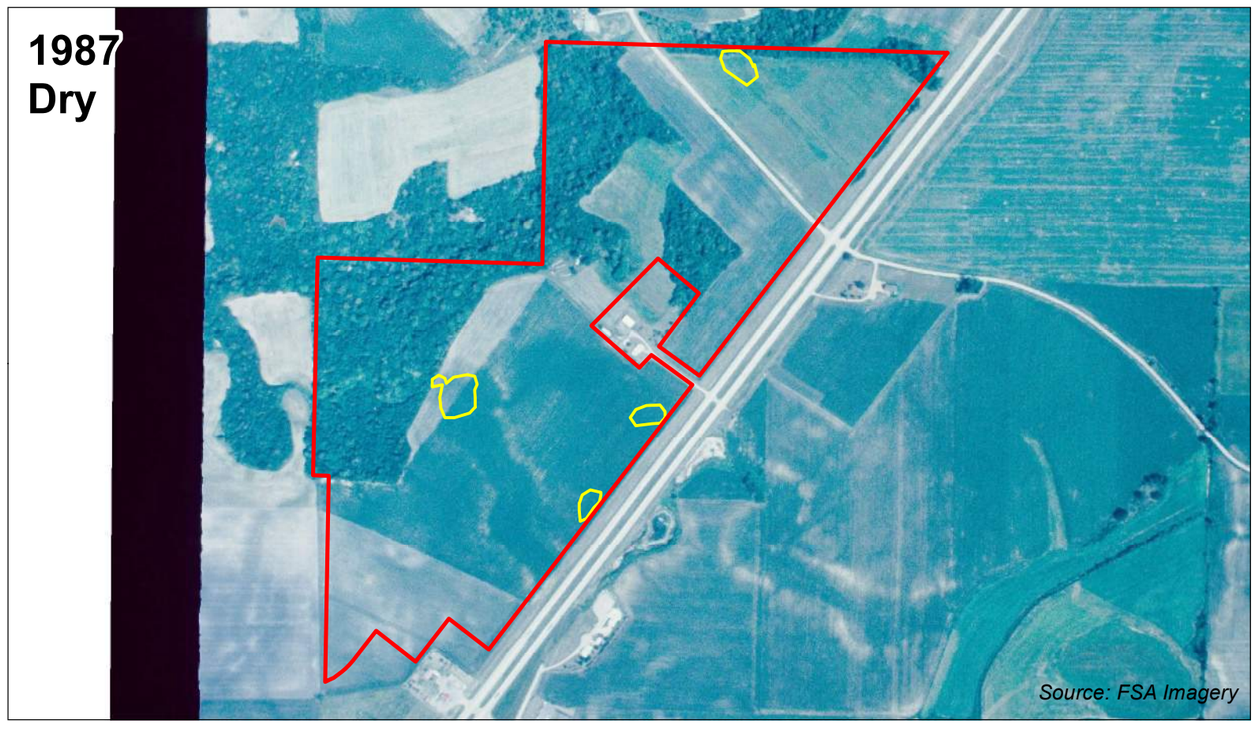

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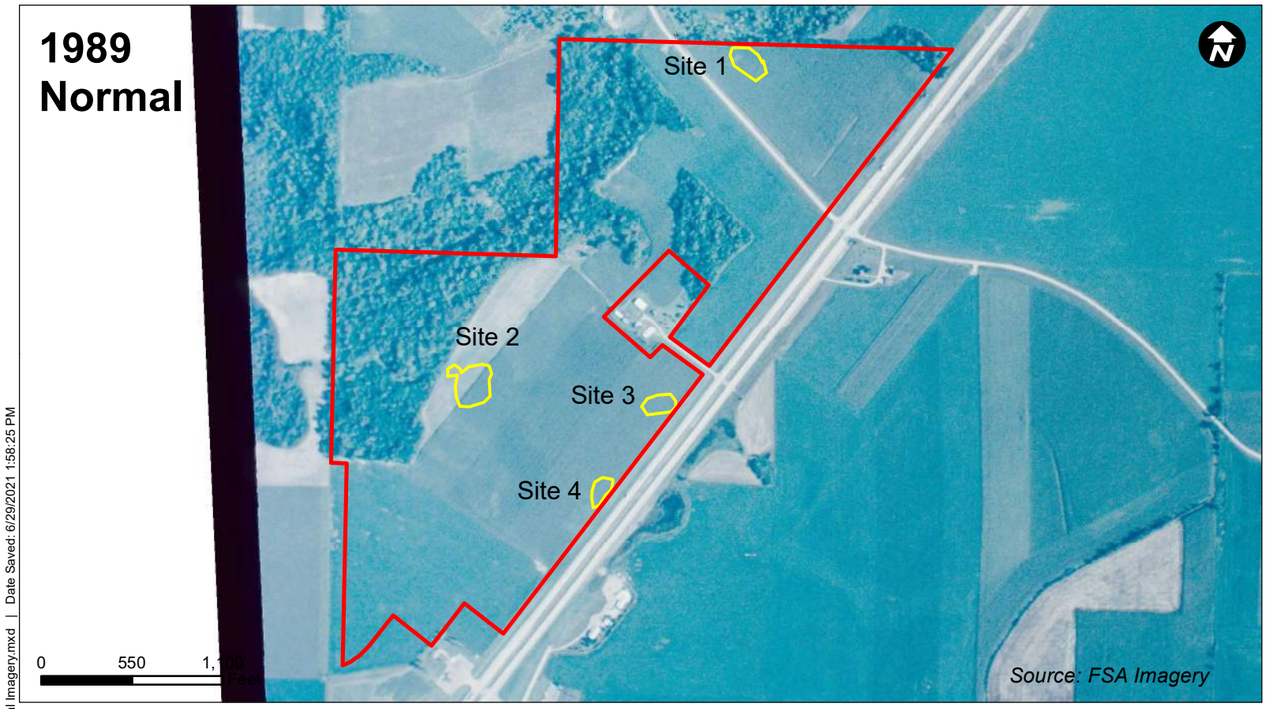

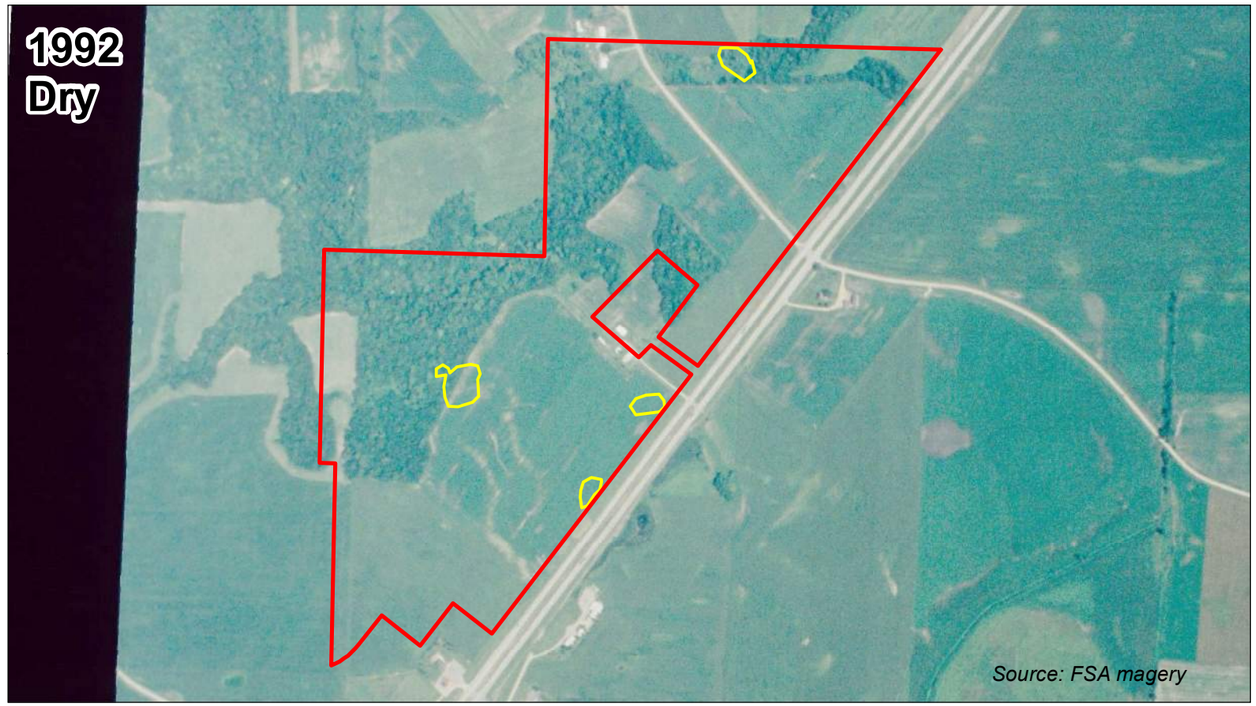

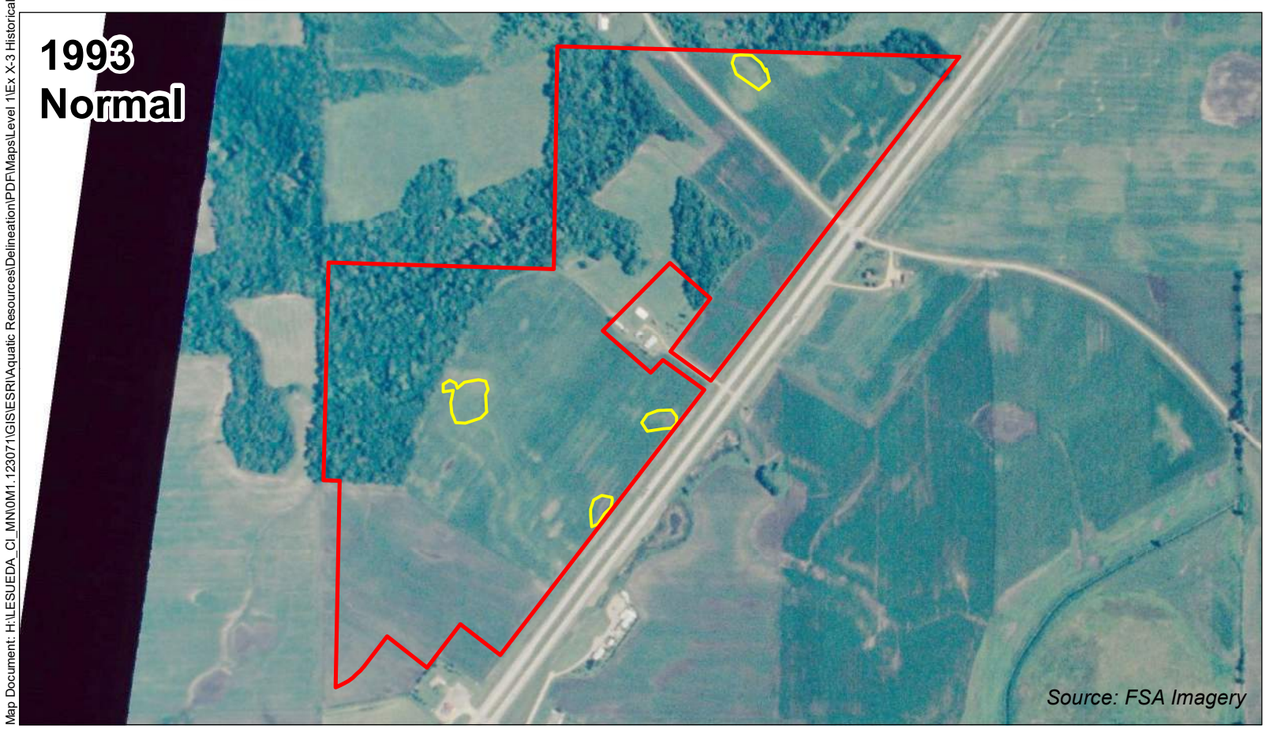

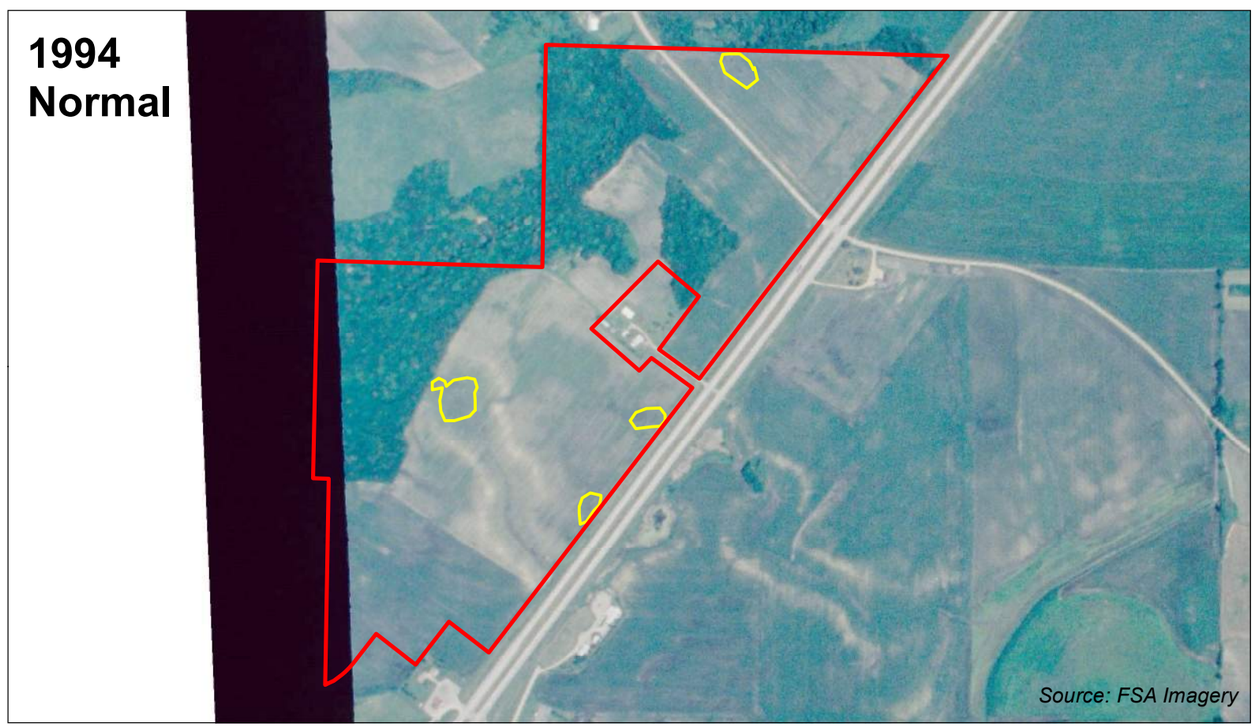

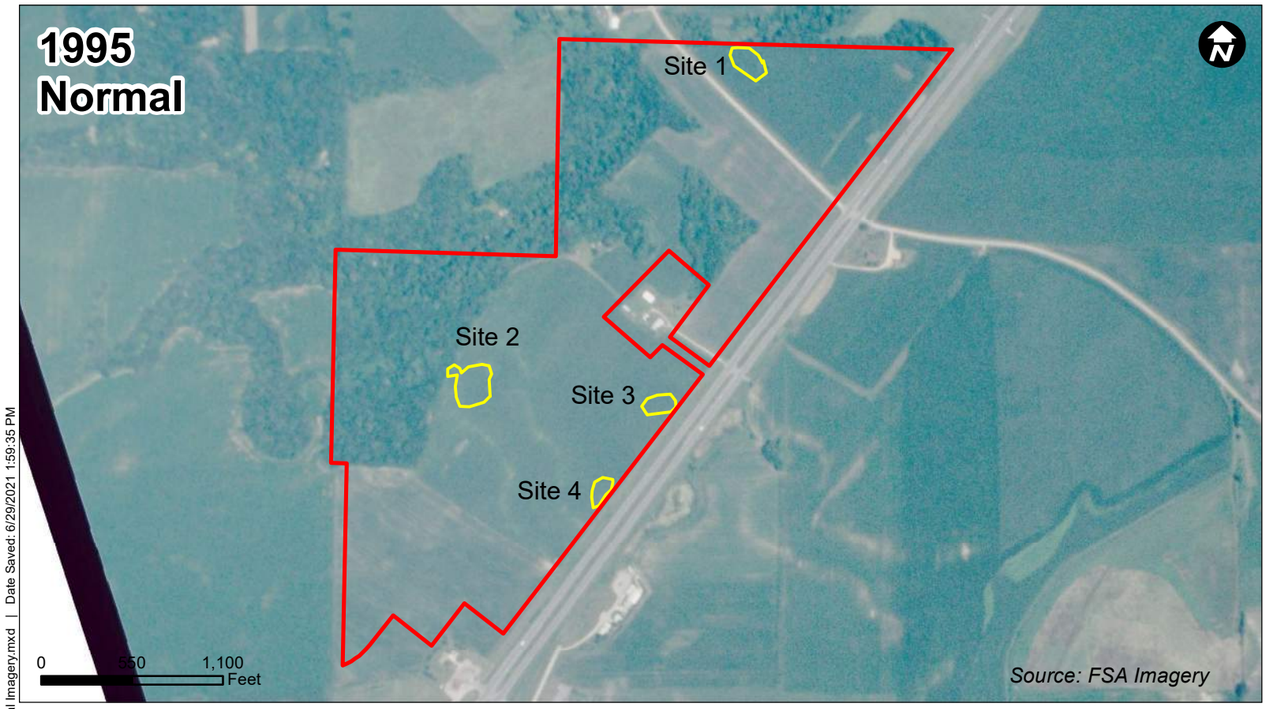

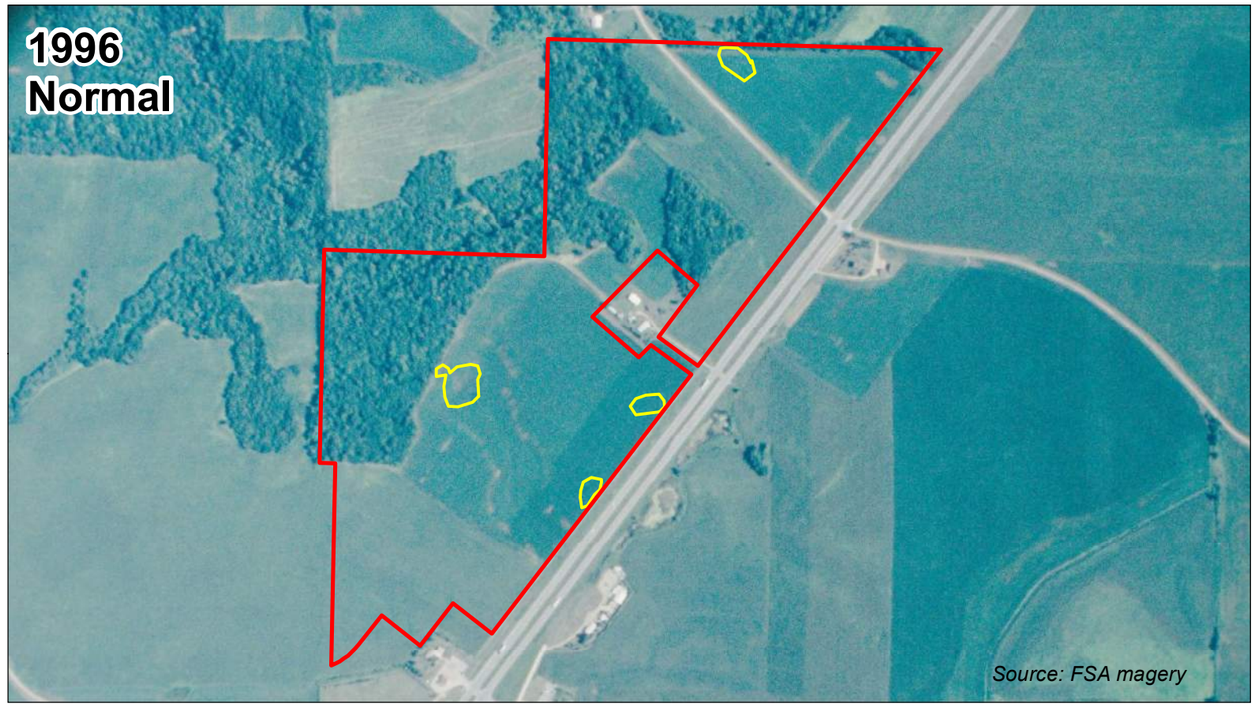

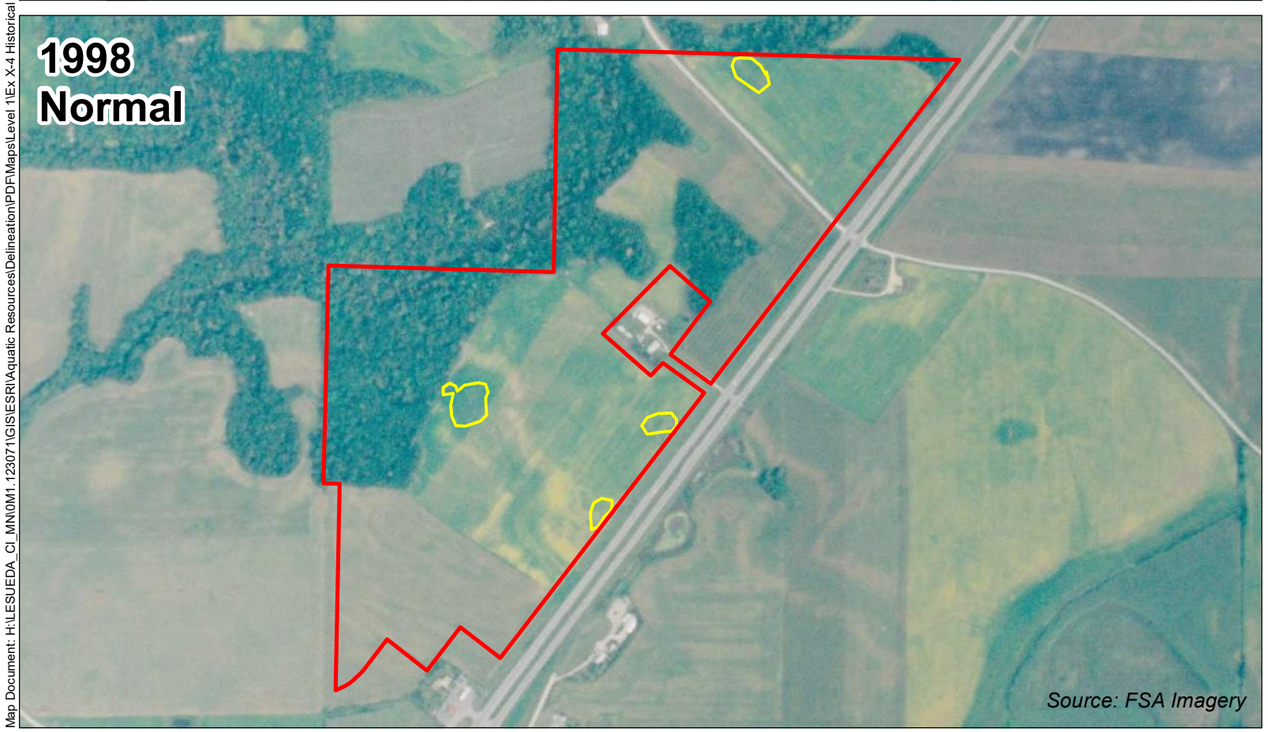

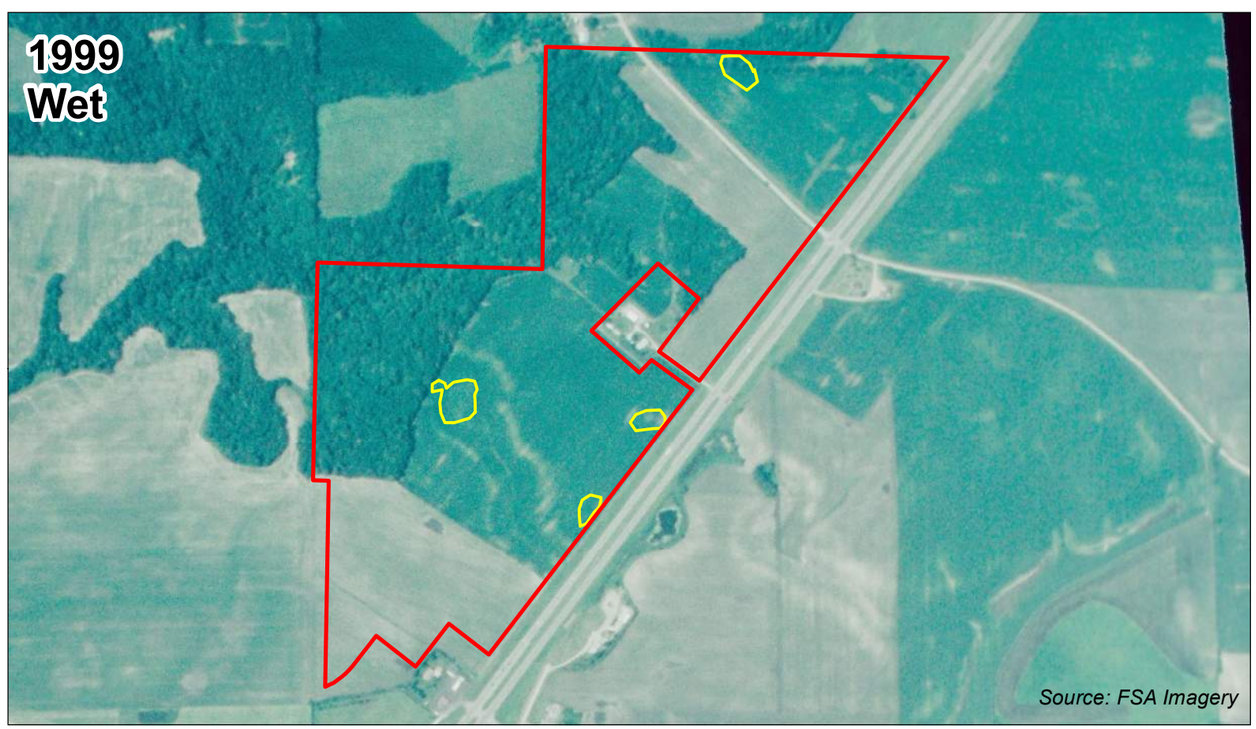

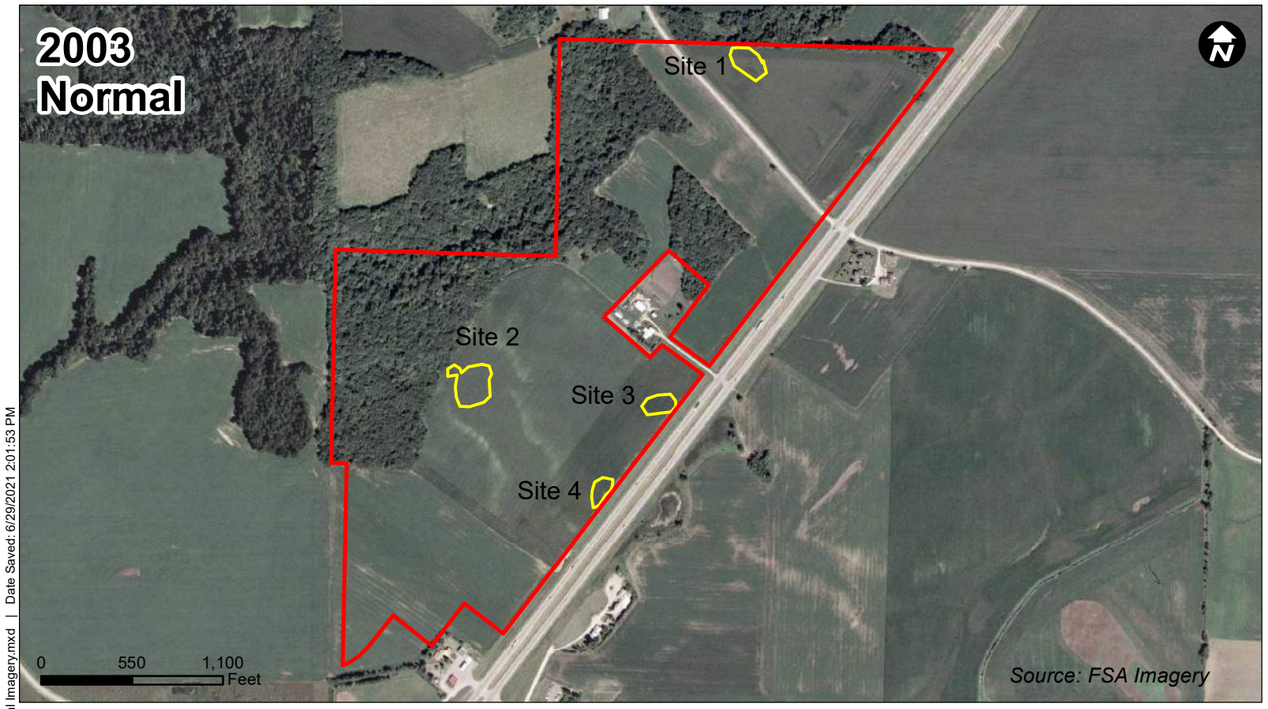

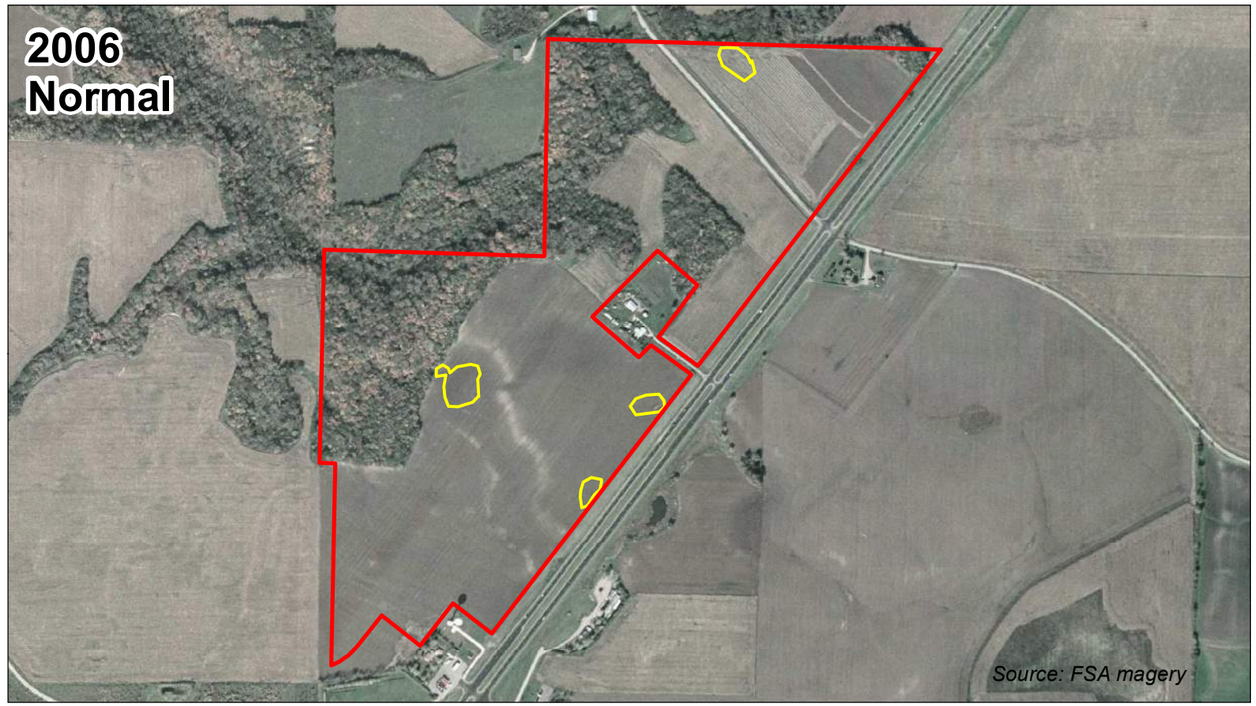

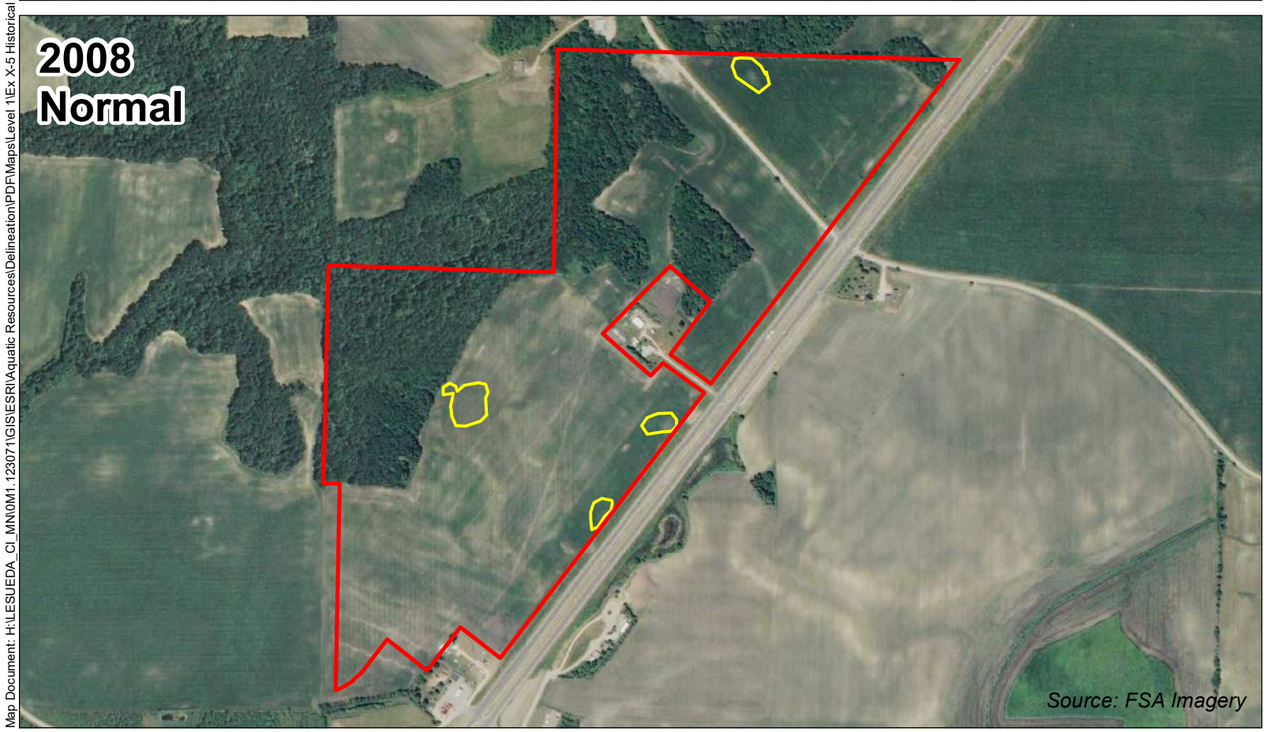

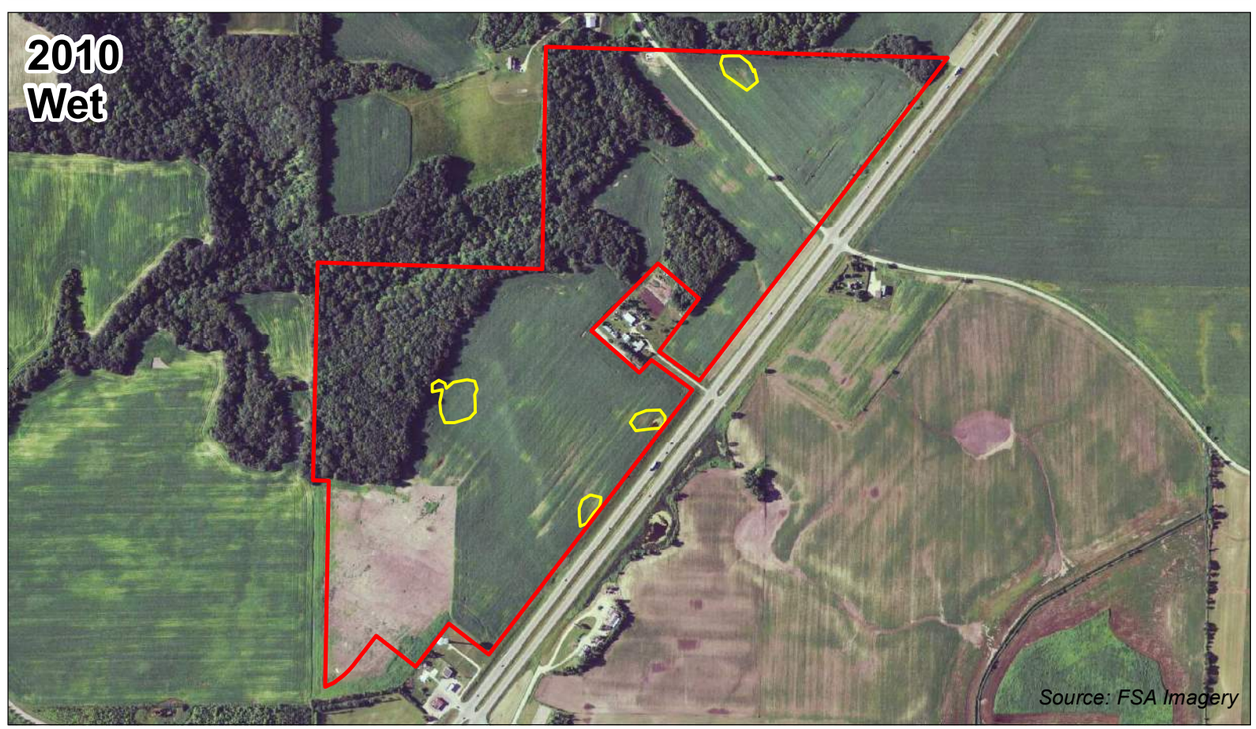

Exhibit H-6: Historical Imagery 2013-2019

June 2021

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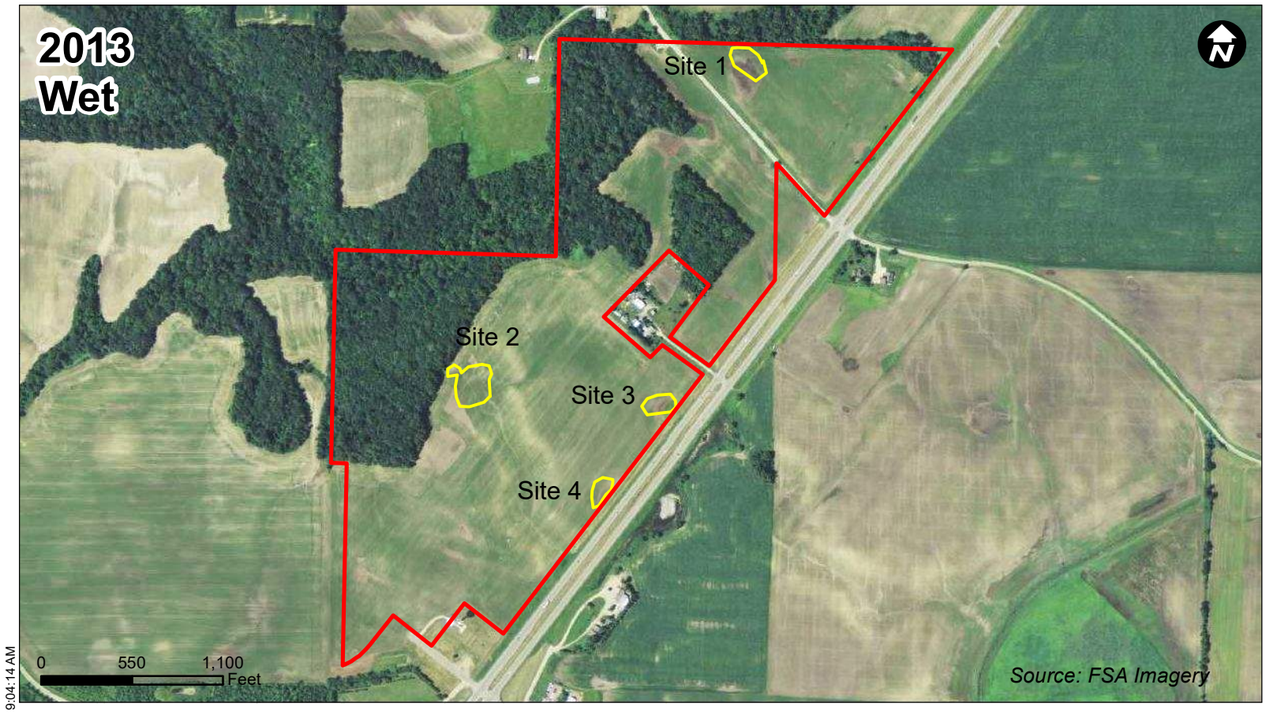

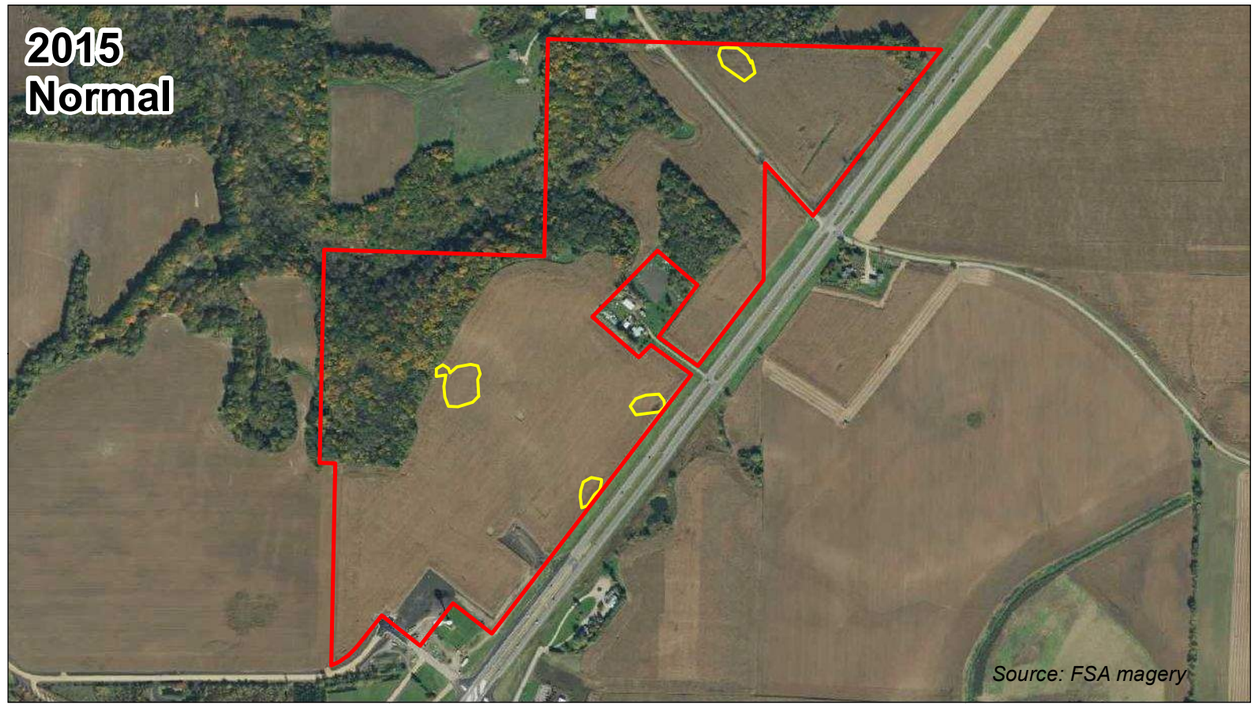

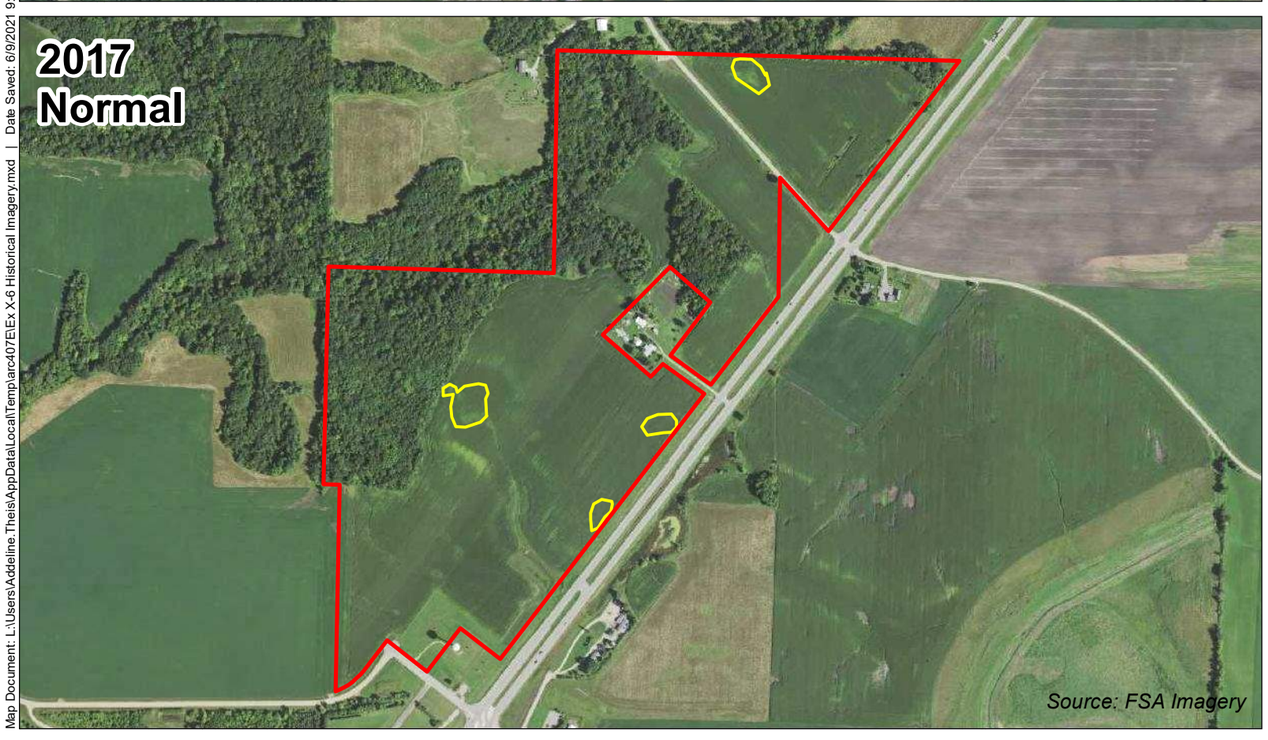

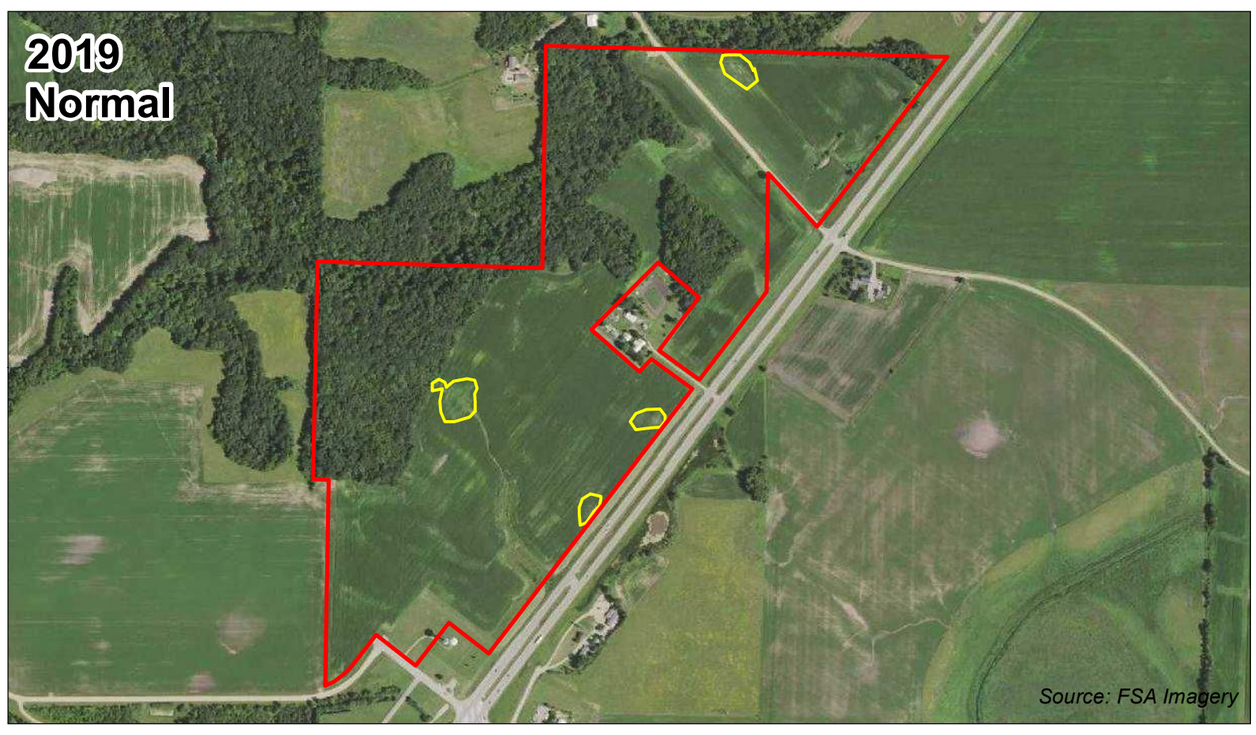

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EXHIBIT G:
OFF-SITE HYDROLOGY ASSESSMENT
RECORDING FORM

Project/Site:	**Le Sueur Econmic Development Authority**	City/County:	**Le Sueur, Le Sueur County**
Applicant/Owner:		State:	**Minnesota**
Investigator(s):	**Addeline Theis**	Sec, Twp, Ran:	**Sec 17, T112N, R25W**
WETS Station ID:		Date:	**June 1st 2021**

Date:	Source:	Assumed Month:	Climatic Condition:	Image Interpretations				
				Site 1	Site 2	Site 3	Site 4	Notes
8/21/1938	MHAPO		Normal	NV	NV	NV	NV	**Site 1 is forested at this point**
7/14/1951	MHAPO		Wet	NV	DO	NV	NV	**Site 1 is forested at this point**
1979	FSA	June	Normal	NV	NV	NV	NV	**Site 1 is no longer forested**
1980	FSA	June	Dry	NV	NV	NV	NV	
1981	FSA	July	Normal	CS	NV	NV	NV	
1985	FSA	August	Normal	NV	NV	NV	NV	
1986	FSA	August	Wet	NC	NV	DO	NV	
1987	FSA	July	Dry	NV	CS	NV	NV	
1989	FSA	June	Normal	CS	NV	NV	NV	
1992	FSA	June	Dry	CS	CS	CS	NV	
1993	FSA	June	Normal	CS	CS	CS	CS	
1994	FSA	July	Normal	NV	NV	NV	NV	
1995	FSA	June	Normal	NV	NV	NV	NV	
1996	FSA	July	Normal	NV	CS	NV	NV	
1998	FSA	August	Normal	NV	NV	NV	NV	
1999	FSA	August	Wet	NV	NV	CS	NV	
2003	FSA	June	Normal	NV	NV	NV	NV	
2006	FSA	September	Normal	NV	NV	CS	NV	
2008	FSA	June	Normal	CS	NV	NV	NV	
2010	FSA	July	Wet	CS	NV	CS	CS	
2013	FSA	July	Wet	DO	NV	CS	CS	
2015	FSA	September	Normal	NV	NV	CS	NV	
2017	FSA	August	Normal	CS	CS	NV	NV	
2019	FSA	September	Normal	CS	CS	CS	NV	
			Hydric Soil	**Yes**	**Yes**	**No**	**No**	
			NWI	**No**	**No**	**No**	**No**	
			Normal Years	**16**	**16**	**16**	**16**	
			Wet Signatures	**6**	**4**	**4**	**1**	
			Percent Wet Signatures	**38%**	**25%**	25%	**6%**	

NV - Normal Vegetation, WS - Wet Signature, CS - Crop Stress, DO - Drown Out, SW - Standing Water, AP - Altered Pattern, NC - Not Cropped

Decision Matrix

Hydric Soil	NWI	% Wet	% Wet	Field visit?	Wetland?
Yes	Yes	>50%	>50%	No	Yes
Yes	Yes	30-50%	30-50%	No	Yes
Yes	Yes	<30%	<30%	Yes	Yes, w/field hydro
Yes	No	>50%	>50%	No	Yes
Yes	No	30-50%	30-50%	Yes	Yes, w/field hydro
Yes	No	<30%	<30%	No	No
No	Yes	>50%	>50%	No	Yes
No	Yes	30-50%	30-50%	No	Yes
No	Yes	<30%	<30%	No	No
No	No	>50%	>50%	Yes	Yes, w/field hydro
No	No	30-50%	30-50%	Yes	Yes, w/field hydro
No	No	<30%	<30%	No	No

Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

Level 1 Study Area Map

June 2021

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